HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. (949) 777-1266
w. www.haieng.com
e. hai@haieng.com

May 7, 2019

Sixth Street Viaduct Division
Bureau of Engineering | Department of Public Works
City of Los Angeles
585 S Santa Fe Avenue
Los Angeles, CA 90013

Attn: Gary Lam, P.E., Senior Civil Engineer

SUBJECT: FINAL REPORT ON
ENVIRONMENTAL SITE INVESTIGATIONS (HAZMAT)
SIXTH STREET VIADUCT - PARC IMPROVEMENTS
LOS ANGELES, CA 90021-23
HAI Project No. LAC-17-001

Dear Mr. Lam:

This document presents the updated findings and recommendations on Environmental Site Investigation Services performed by Hushmand Associates, Inc. (HAI) for Sixth Street Viaduct PARC Improvements Project in the City of Los Angeles, California.

Sincerely yours,

HUSHMAND ASSOCIATES, INC.

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REGISTERED PROFESSIONAL ENGINEER
BEHNAM HUSHMAND
No. C 044777
Exp. 3/31/20
CIVIL
STATE OF CALIFORNIA

Ben Hushmand

Ben Hushmand, PhD, PE
President, Principal Engineer

Michael Leonard, PE
Associate Principal Engineer

CC: Mauricio Argente, RLA

ENVIRONMENTAL SITE INVESTIGATIONS (HAZMAT)
SIXTH STREET VIADUCT - PARC IMPROVEMENTS
LOS ANGELES, CALIFORNIA

Prepared for
Sixth Street Viaduct Division
Bureau of Engineering | Department of Public Works
City of Los Angeles
585 S Santa Fe Avenue
Los Angeles, CA 90013

and

Tetra Tech
350 S. Grand Avenue, Suite 33100
Los Angeles, CA 90071

Prepared by
Hushmand Associates, Inc.
250 Goddard
Irvine, California 92618
hai@haieng.com
(949) 777-1266

May 2019

EXECUTIVE SUMMARY

Hushmand Associates, Inc. (HAI) has completed this Phase II Environmental Site Assessment for the proposed Landscape Design of West Park, Arts Plaza, Tunnel Rehabilitation, River Terracing & Bicycle Connection, and East Park areas as part of the Sixth Street Viaduct Replacement Project (Project). The project is referred to as Park, Arts, and River Connectivity Improvements (PARC) as part of the Sixth Street Viaduct Replacement Project. At the request of Tetra Tech Inc. (TTI) and the City of Los Angeles (City), HAI has conducted this Phase II Environmental Site Assessment to evaluate soil, soil gas, and groundwater in the project area for potential hazards to construction workers or the general public during construction of the Project and during the planned land uses, and to perform waste characterization of soil and groundwater for proper disposal of surplus soil and groundwater generated during the Project and as part of the remediation. In addition the scope of work and report include evaluation of areas within the PARC Project boundaries with soil and/or soil gas contaminants potentially in excess of the California EPA Department of Toxic Substances (DTSC) Health Risk Screening Values for the unrestricted land use scenario, assessment/selection of alternatives for remediation, and rough order of magnitude (ROM) cost estimates for remediation. The assessment also included borings in an unpaved area in Caltrans Right-of-Way near US-101 Freeway for sampling and testing for aerially-deposited lead (ADL) in near surface soils. The field and laboratory data were analyzed to identify the appropriate handling of soil affected by ADL under the terms of the agreement between DTSC and Caltrans dated June 30, 2016.

HAI reviewed available prior environmental reports and investigations for the project area and used the information to develop a Sampling and Analysis Plan (SAP), including Site-Specific Health and Safety Plan which was approved by TTI and the City and implemented during the field work. The field investigations (borings, soil vapor probes, methane testing) performed for this phase of environmental assessment focused primarily on shallow soil and soil gas conditions due to the nature of the proposed PARC facilities (i.e., no planned deep excavations or foundations) and because prior investigations had completed deep soil and groundwater investigations. In some areas, the investigation focused on contaminants of concern based on prior sampling/testing results. HAI assembled and reviewed the data from this and available prior investigations and performed the screening against published DTSC health risk screening values. Subsequent to issuing of our report in September 2017, the City Bureau of Engineering (BOE) approved completion of a baseline Human Health Risk Assessments (HHRAs) for six (6) of the PARC areas found in prior investigations to have chemical contamination in soil and/or soil gas. This current update to the report includes the findings of those HHRAs.

The results of the review, investigations and HHRAs indicate six zones with soil contamination classifying the soil as California (Non-RCRA) Hazardous Waste or RCRA Hazardous Waste, and two zones with soil gas contamination. The soil contamination is primarily total petroleum hydrocarbons in the diesel range organics (TPH DRO) and lead. Also, two areas have methane mitigation included in the recommendations and ROM remediation cost estimate as they are in the Methane Zone or had methane detected. The areas, category of contamination and estimated extent are shown on figures and tables in this report. The figures and tables have been updated or annotated based on the results of the HHRAs. Section 15 includes review of remediation alternatives and ROM cost estimates, totaling "$5,467,948 (-20%), $6,834,935, and $8,543,669 (+25%), provided in Table 9.

The types and extent of contamination (i.e., heavy metals and some hydrocarbons in near surface soils) is quite typical for areas with many years of industrial and commercial uses. The proposed remedial measures, including removal and replacement of soils with RCRA and non-RCRA (California) Hazardous levels of heavy metals, and soil vapor extraction and treatment for volatile organic compounds prior to venting are established, proven, and safe techniques which have been implemented at many sites in Los Angeles. Also, the City has currently elected to set cleanup criteria at unrestricted land use levels, even though no residences will be within or adjacent to the project limits, to provide further protection to human health and the environment. The remediation will be completed in accordance with a Remedial Action Plan approved

by the lead regulatory agency, i.e. Los Angeles County Fire Department Site Mitigation Unit, which will also provide oversight during the process. Excavation of soils in areas with volatile organic compounds in the soil and/or soil gas will be performed and monitored in accordance with Rule 1166 Mitigation Plan approved by South Coast Air Quality Management District (SCAQMD).

The report also includes recommendations for additional investigations in some areas and during remediation implementation, performance of a focused HHRA prior to construction and design of remediation systems followed by obtaining bids from experienced remediation contractors for implementation of the work. The focused HHRA could include risk analysis based on Park User exposure parameters instead of the very conservative unrestricted land use exposure parameters, definition and exclusion of "outliers" (i.e., individual test results which meet the definition of "outliers") and parsing of the data both vertically and horizontally to focus the extent and depths of remediation in each PARC area. The ROM remediation estimate included in this report is based on the manual/observational analysis of the data to estimate the areas and volumes of remediation and does not utilize the parsing of data based on the HHRA results.

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SIXTH STREET VIADUCT PARC IMPROVEMENTS
LOS ANGELES, CALIFORNIA

1.0 INTRODUCTION

Hushmand Associates, Inc. (HAI) is pleased to provide Tetra Tech Incorporated (TTI) and the City of Los Angeles Bureau of Engineering (City) with this report for hazardous materials investigations for the proposed Landscape Design of West Park, Arts Plaza, Tunnel Rehabilitation, and East Park areas as part of the Sixth Street Viaduct Replacement Project (PARC Project), as shown in Figure 1. The project site extends along East Sixth Street from Mateo Street and along Whittier Boulevard to west of U.S. Highway 101 (Figure 1).

HAI has reviewed the available existing geotechnical and hazardous material investigations and reports for the project area (as shown in Figures 2 and 3). These investigations have shown several locations with some of the following heavy metals: arsenic, barium, cadmium, chromium, copper, lead, mercury and zinc, and/or diesel and oil range petroleum hydrocarbons in soil samples. Other locations have volatile organic compounds in soil gas. The concentrations detected exceed the California EPA/DTSC published human health risk screening levels for unrestricted land use scenario and in some cases they exceed the screening levels for commercial/industrial scenario. Based on this review, it was determined that additional investigations were needed to better define the extent of contamination and assist in developing possible mitigation/remediation procedures and rough order of magnitude costs. The City and TTI requested that HAI prepare a Sampling and Analysis Plan (SAP) for the additional investigations. The SAP was approved by the City and TTI on April 25, 2017.

This report presents:

- Findings of the current investigation;
- Results of the Human Health Risk Assessment (HHRA) recently completed for the PARC areas of concern (Area 1A, 2, 5, 6, 7 and 8);
- Summary of the prior investigation data combined with data from this investigation;
- Recommendations for handling of soil and groundwater expected to be encountered during construction of the project;
- Assessment of alternatives for remediation and rough order of magnitude costs for remediation of soil and soil gas, where appropriate;
- Findings and recommendations for soils with aerially deposited lead (ADL) within Caltrans Right-of-Way; and
- Recommendations for additional sampling and testing where needed, in our opinion and for a focused HHRA.

2.0 BACKGROUND

2.1 CURRENT AND PRIOR SITE USES

The site is currently surrounded by several commercial buildings at the west end of the project between Mateo and Santa Fe Streets, commercial buildings at the east end of the project, open lots and connecting and underlying roadways. The Sixth Street Viaduct, located east of downtown Los Angeles, carries four lanes of traffic in an east-west direction over the Los Angeles River, the Union Pacific Railroad (UPRR)

and Metrolink tracks, and U.S. Highway 101. The Sixth Street Viaduct, the longest of the bridges crossing the Los Angeles River, was constructed in 1932 using state-of-the-art (at that time) concrete technology and onsite mixing plants. Most of the property surrounding the site has not changed to any large extent, and most of the commercial/industrial buildings have been in existence since 1928.

2.2 SITE OR SAMPLING AREA DESCRIPTION

The site or sampling area occupies approximately 13 acres in a primarily commercial/industrial area. The specific locations of the sampling areas from previous and current investigations within West Park and East Park areas are shown in Figures 2a through 5b.

2.3 PREVIOUS INVESTIGATIONS/REGULATORY INVOLVEMENT

The regulatory involvement in the hazardous materials issues at the current project site has been the following. Notification by the City of Los Angeles to the California Environmental Protection Agency (CalEPA)/ California Department of Toxic Substances Control (DTSC) of hazardous levels of heavy metals in soil at Parcel 18.1, 631 South Anderson Street (City filed a Resource Conservation and Recovery Act [RCRA] Subtitle C Site Identification Form), and Parcel 18.2, 625 South Anderson Street with removal/disposal of the stockpile of soil under EPA Hazardous Waste ID. The Metro 20 (prior Butterfield Property) site, located at 590 South Santa Fe Avenue, is in process of implementing remediation of both groundwater and deep soil contamination plumes that extend under the City's Sixth Street Right-of-Way (ROW). The work is being performed under a Voluntary Cleanup Agreement between Metropolitan Transportation Authority (MTA) and EPA/DTSC. The AMEC Foster Wheeler report of subsurface soil and soil gas investigation dated August 8, 2007 for Parcel 32 in PARC Area 2B (called Parcel 2 in the report but at the same address as Parcel 32) discusses a Remedial Action Order (RAO) by the California EPA/DTSC issued to Amtrak for past operations on the property. The AMEC report concluded that Volatile organic compounds (VOCs), Semi-volatile organic compounds (SVOCs) and heavy metals were not of environmental concern and recommended that the site be removed from the RAO. However, the HAI investigation of the property performed in August-September, 2015 did not confirm the findings of the Amec Foster Wheeler (AMEC) report as regards contaminants is soil gas, rather it indicated VOCs in soil gas exceeding DTSC screening levels.

The SAP includes a summary of prior investigations and the findings and recommendations of those investigations. The findings and data from these prior investigations were used to develop the SAP and have been incorporated in the analysis of site conditions presented in this report.

Also, portions of the project area are located within the mapped Methane Zone and Methane Buffer Zone and any structures or underground installations will need to comply with the City of Los Angeles Building Code Methane Zone Standards.

3.0 PROJECT DATA QUALITY ASSURANCE

Data Quality Assurance included acquiring representative samples of the subsurface soil, soil gases, and groundwater for analysis of potential contamination and the extent. Sampling acquisition, field screening, packing, preserving and transporting followed diligent Standard Operating Procedures included in the SAP to avoid sample disturbance, loss or mislabeling. Laboratory testing was performed by testing facilities certified by the State of California as qualified for performing the designated Environmental Protection Agency (EPA) test methods and with Quality Assurance/Quality Control (QA/QC) programs. Further detail is provided in Sections 4.4 and 11.0.

4.0 DESCRIPTION OF FIELD AND LABORATORY INVESTIGATIONS

The purposes of the investigation was to further define the nature and extent of contaminated soils and soil gases, assess the levels of contamination against established guidelines, to prepare a plan for handling and

treatment/disposal of the contaminated materials, and to provide rough order of magnitude cost estimates for the mitigation/remediation. The SAP which was implemented involved an environmental subsurface investigation consisting of the following.

4.1 PRE-FIELD INVESTIGATION ACTIVITIES

4.1.1 Marking of Boring Locations and Utility Clearance

To avoid utility conflicts, HAI reviewed available utility maps for the project area prior to marking the proposed boring locations. The proposed boring locations were marked either with White Marker Spray Paint or Wooden Stakes (with an orange ribbon attached for visibility) for notifying Underground Service Alert (USA) to mark the existing utility lines in the vicinity. Final boring locations were field determined based on access and utility clearances.

4.2 FIELD INVESTIGATION ACTIVITIES

Prior to beginning the fieldwork, all field personnel (including the drilling company personnel) were required to review and sign the site-specific Health and Safety Plan (HASP). Tailgate safety meeting was organized every day prior to beginning of field activities at the site. The site safety meeting logs are included in Appendix A.

Per approved SAP, a total of 33 locations were drilled using either direct push method or hand auger method to obtain soil samples and to install vapor probes for obtaining soil vapor samples at specific depths. All the borings except ADL borings (9-1, 9-2, and 9-3) were performed using direct push method. Continuous sampling was performed at the borings performed using direct push method. The details of the borings are summarized in Table 1.

The field investigation activities were performed from May 15, 2017 through May 17, 2017. Locations of borings and soil vapor probes from this investigation are shown on Figures 3a and 3b.

Locations of all the borings and soil vapor probes from prior investigations and this investigation are shown on Figures 4a through 5b.

4.2.1 Shallow Soil Borings and ADL Sampling

Per approved SAP, shallow soil borings to depths between 2 feet (ft.) and 7.5 ft. below ground surface (bgs) were performed in areas indicated on Figures 3a and 3b. Soil samples were typically collected at 0.5, 1, 3, and 5 ft. depths. Where the borings were 7.5 ft. in depth, samples were collected at 1.0, 3.0, 5.0, and 7.5 ft. depths.

Soil boring 7-1 could not reach the target depth and encountered refusal at shallower depth of 3.0 ft. bgs. Sampling was not possible at 3.0 ft bgs due to refusal. Three more locations were tried around the original location but encountered similar refusal conditions.

Three (3) shallow hand-auger borings to 5 ft. depth bgs were performed in the area near the U.S. Highway 101 as shown on Figure 3b. Samples were typically collected at 0-0.5, 1, 3 and 5 ft. depths and tested for ADL per Caltrans procedures. This investigation was performed since the area is within Caltrans ROW and some improvements are proposed.

Soil boring 9-2 could not reach the target depth and encountered refusal at shallower depth of 1.2 ft. bgs. Few more locations were tried around the original location but encountered similar refusal conditions. The refusal was due to a concrete slab in the area.

The obtained soil samples from these shallow borings were transported to a State-certified environmental laboratory for testing. The details of laboratory testing are discussed in Section 4.3.

4.2.2 Soil Vapor Probes

Per approved SAP, soil vapor probes were installed and sampled at locations shown on Figures 3a and 3b. Soil vapor probes were sampled at 5, 10, and 15 ft. depths such that discrete samples were obtained at each depth. Also, an ambient air sample was obtained at each area or parcel.

The obtained soil vapor and ambient air samples were transported to a State-certified environmental laboratory for testing. Testing of the samples is described in Section 4.3.

4.2.3 Combination Soil Boring and Soil Vapor Probes

Some locations, as specified in SAP, had soil samples taken by the direct push method in the upper 5 ft. depth bgs then continued as soil vapor probes with samples of soil gas taken at 5, 10, and 15 ft. depths. Also, an ambient air sample was obtained at each area or parcel. Testing of the samples is described in Section 4.3.

4.3 LABORATORY TESTING

Soil samples from the shallow soil borings were selected for laboratory analysis based on field screening and transported under chain-of-custody (COC) to a State-certified laboratory and analyzed for the compounds of concern as identified in SAP.

Soil vapor samples and an ambient air sample from each parcel area of sampling were transported under chain-of-custody to a State-certified laboratory and analyzed for the compounds of concern as identified in SAP.

Copies of the chain-of-custody logs are included in Appendix A.

4.4 DATA MANAGEMENT

The following checklist was followed by the project team to ensure quality of data management:

1. A briefing of all staff expected to work was conducted. The briefing included project objectives, sampling methods, health and safety and the analysis process.
2. The Standard Operating Procedures (SOPs) included in Appendix B of the SAP were reviewed and implemented by each staff member who was responsible for the fieldwork.
3. The HAI Project Manager reviewed regularly and checked the project progress against this checklist.
4. The HAI Project Manager received copies of boring logs, daily reports and chain-of-custody forms (which include laboratory tests requested on each sample) from the field and office staff and reviewed for accuracy.
5. The sample testing criteria provided in Section 5.1 was implemented to ensure the testing frequencies and types were being met.
6. The testing laboratory certified their QA/QC procedures and included all QC test results in their reports.
7. HAI's Senior Environmental Engineer/PE established the system for review of the lab results against the relevant criteria, categorizing the soil contaminations and assembling of the boring and lab test data on the graphics to be used for evaluating the extent of each soil contamination category.

8. The draft report of findings and recommendations was reviewed by HAI's QA Manager and Senior Environmental Engineer/PE prior to submittal to Tetra Tech and City for additional review. The final report will incorporate comments by Tetra Tech and City staff.

5.0 SAMPLING RATIONALE

5.1 SAMPLING AND SELECTION FOR LABORATORY TESTING

The investigation included the soil borings and sampling, soil vapor probes and sampling for laboratory chemical analysis as outlined above in Section 4.0. The rationale for sampling program is explained in the approved SAP.

All soil samples from the shallow borings were observed for visual evidence of petroleum hydrocarbons and field screened using either a photoionization detector (PID) for detecting VOCs. The PID logs are included in Appendix A.

6.0 REQUEST FOR ANALYSES

The requests for testing were prepared by the field staff following the guidelines provided in Sections 4.0 and 5.0 above, then reviewed by the HAI Senior Environmental Engineer prior to submittal to the laboratory.

6.1 ANALYTICAL LABORATORIES

The laboratories selected for this project are certified by the State for performance of the indicated test methods. They follow strict QA/QC procedures meeting EPA requirements.

7.0 FIELD METHODS AND PROCEDURES

The field methods and procedures as described in the SAP were implemented during the investigation and sampling activities.

7.1 DECONTAMINATION PROCEDURES

The approved decontamination procedures for field equipment presented in SOP 3 in Appendix B of the SAP were followed. Details of personnel decontamination are provided in the HASP included as Appendix A of the approved SAP.

8.0 SAMPLE CONTAINERS, PRESERVATION AND STORAGE

All soil samples were collected, packaged, preserved and stored for transportation to the laboratory as described in SOP 5 included in Appendix B of the SAP. Soil gas samples were obtained following procedures in SOP 9 in Appendix B of the SAP.

9.0 DISPOSAL OF RESIDUAL MATERIALS

In the process of collecting environmental samples at the Project Site during the site investigation, the HAI sampling team generated different types of potentially contaminated materials that included the following:

- Used personal protective equipment (PPE)

Used PPE and disposable equipment were double-bagged and placed in a municipal refuse dumpster. These wastes are not considered hazardous and can be sent to a municipal landfill.

10.0 SAMPLE DOCUMENTATION AND SHIPMENT

10.1 FIELD NOTES

The following information was recorded during the collection of each sample:

- Sample location and description
- Sampler's name(s)
- Date and time of sample collection
- Type of sample (soil, sediment or water)
- Unique Identification Number (UIN)
- Type of sampling equipment used
- Field instrument readings and calibration
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odors, colors, etc.)
- Preliminary sample descriptions (e.g., for soils: clay, loam, very wet; for water: clear water with strong ammonia-like odor)
- Sample preservation
- Sample identification numbers and any explanatory codes, and chain-of-custody form numbers
- Name(s) of recipient laboratory

10.2 PHOTOGRAPHS

Photographs were taken at the sampling locations and at other areas of interest on site or sampling area. They serve to verify information entered in the field daily logs. Selected photographs taken during field investigation activities are presented in Appendix A.

10.3 LABELING

All samples collected were labeled in a clear and precise way for proper identification in the field and for tracking in the laboratory. The samples were given identifiable and unique numbers.

10.4 SAMPLE CHAIN-OF-CUSTODY FORMS AND CUSTODY SEALS

All sample shipments for analyses were accompanied by a chain-of-custody record. Copies of the completed forms are included in Appendix A.

11.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) AND DATA VALIDATION

Field QA/QC included daily collection of equipment blanks, trip blanks, field blanks and duplicate samples for a total of up to 10% of each soil vapor sample.

Data Validation was performed following the U.S. Environmental Protection Agency (USEPA) Region 9 Superfund Data Evaluation Validation Criteria and the USEPA Guidance on Environmental Data Verification ad Data Validation. Tier 1A Data Validation procedures were utilized for the project. Tier 1A procedures include review of the data package for completeness; review of chain of custody forms (against laboratory reported information), for signatures, sample condition upon receipt by the laboratory, and

sample preservation; review of holding times; review of Quality Control (QC) summaries; review of blank results for possible field or laboratory contamination; and random checks of reported results against raw data.

The following describes the findings of the Data Validation. Prior to submitting soil samples to the laboratory, the chain-of-custody documents were reviewed for accuracy and completeness. The laboratory reports were crosschecked with the chain-of-custody forms to confirm accurate transposing of sample information. Field and laboratory personnel implemented QA/QC procedures in conformance with the criteria specified in the SAP. Laboratory quality assurance and quality control data (method blanks, laboratory control samples and duplicates, matrix spike samples and duplicates) were also reviewed for compliance with project's QA/QC objectives. Based on this validation process, the data contained herein are adequate for the purposes of this study. Copies of the laboratory reports and chain-of-custody forms are included as Appendix C.

12.0 FIELD VARIANCES

As conditions in the field varied, became necessary to implement minor modifications to sampling as presented in the SAP. When appropriate, QA Officer and HAI Project Manager were notified and a verbal approval was obtained before implementing the changes. The variances in the field investigation activities are explained in Section 4.2.

13.0 FIELD HEALTH AND SAFETY PROCEDURES AND TRAFFIC CONTROL

During all field activities, the procedures of site-specific Health and Safety Plan in Appendix A of the SAP were followed.

14.0 DATA ANALYSIS, FINDINGS, AND RECOMMENDATIONS

Locations of borings and soil vapor probes from prior investigations and this investigation are shown on Figures 4a through 5b. The data from the prior site environmental investigations and from this investigation on soil and soil gas contaminants were screened against the California EPA/ DTSC Screening Levels for the unrestricted land use Scenario, RCRA and non-RCRA hazardous material classifications and Caltrans criteria for re-use of soils containing lead (for the samples from borings designated as ADL borings). Screening results are in included in Tables 2, 3, 4, 5 for soil, soil gas and ambient air, methane, ADL, respectively. Findings and recommendations for shallow soil, ADL, and soil gas conditions are presented in sections 14.1, 14.2, and 14.3, respectively. The findings and recommendations have been updated with the results of the baseline HHRAs dated April 2, 2019. The full report on the HHRAs is included as Appendix E. Recommendations regarding handling groundwater which may be encountered (although not likely) during construction are provided in Section 14.5. Remediation alternatives are presented and evaluated in Section 15, which also provides rough order of magnitude cost estimates for remediation.

The HHRA addresses PARC Areas 1A, 2A, 2B, 2C, 5, 6, 7, and 8 as review of environmental data collected over the last several years indicated that these parcels likely pose the greatest potential health risks. This HHRA is conducted in accordance with CalEPA and USEPA guidance. As directed by the Bureau of Engineering (BOE), City of Los Angeles, potential health risks associated with a residential (e.g., unrestricted land use) scenario and a construction scenario are quantified. Soil and soil gas data to depths of ten (10) feet were averaged for each PARC Area. CalEPA/ DTSC HERO HHRA Note 3 (CalEPA, 2018) was the primary source of toxicity criteria. The findings are summarized in the table included in the Executive Summary of the HHRA report and are utilized below in relevant portions of this report.

14.1 FINDINGS AND RECOMMENDATIONS FOR SHALLOW SOIL CONDITIONS

14.1.1 Subsurface Conditions

The soils encountered during sampling were typically fine to coarse, light brown to dark brown, silty, clayey sands with fine to coarse gravel. The moisture content in the soils varied from dry to moist at different locations. Groundwater was not encountered in any of the shallow borings.

14.1.2 Analytical Laboratory Test Results

The laboratory test results from the current and previous investigations are summarized and screened against DTSC unrestricted land use scenario health risk values in Table 2. Complete test reports from the laboratory for this investigation are included in Appendix C, which also includes the laboratories QC reports. Exceedances of the screening values for keeping the soil onsite are identified in the summary tables (highlighted in red). For heavy metals, if the total concentration in soil exceeded the trigger levels, soluble testing was performed. In addition, if total chromium exceeding the screening level additional testing for hexavalent chromium was performed on some of the samples in the area. The following further discusses the results by PARC Area:

PARC Area 1A:

- Seven (7) of the eight (8) borings completed in this area had heavy metals including cadmium and lead at concentrations above the DTSC screening level at depths ranging from 0.5 to 3.0 ft. bgs. Two (2) samples were tested for hexavalent chromium and the results were ND (non-detect, below laboratory reporting limit) and 2.9 milligram per kilogram (mg/kg) which are below the DTSC screening levels. Soluble lead concentrations (STLC) exceeded the DTSC levels but leachable lead concentrations (TCLP) did not exceed RCRA levels. So, the soil would classify as Non-RCRA or California Hazardous Waste.
- Total petroleum hydrocarbons were detected in a few samples but not at levels approaching the screening values.
- Volatile organic compounds (VOCs) were non-detect in the samples tested except for boring A-13-01 which had very high concentrations of VOCs (toluene, ethylbenzene and other hydrocarbon compounds) in the samples acquired at 60 and 65 ft. bgs, just above groundwater. These VOCs are likely related to the release at the adjacent Metro 20 site where a groundwater and deep soil cleanup action is ongoing.
- Semi-Volatile organic compounds (SVOCs) were non-detect (ND) in the four (4) samples tested.
- Three of the four samples tested for Polychlorinated Biphenyls (PCBs) were ND while one sample had Arochlor 1260 detected at a concentration of 17 microgram per kilogram (µg/kg). Arochlor 1260 is a PCB and according to the Risk Assessment Information System (RAIS) information on toxicity of Arochlor® 1260 in humans was not available. However, the detected concentration of 17 µg/kg is orders of magnitude below the oral, inhalation and dermal exposure limits of concern discussed in the RAIS database.
- Four samples tested for organochlorine pesticides were reported as ND or below the DTSC screening levels.
- The baseline HHRA (which utilizes an averaging process for all samples in the upper ten ft. depth) indicates that Total Petroleum Hydrocarbons (TPH) Diesel range organics (DRO) and lead exceed the toxic (non-cancer) risk criteria in the residential and construction worker exposure scenarios.

PARC Area 1B:

One (1) boring, 1B-1, was completed to 5 ft. bgs and tested for Title 22 heavy metals. The results were all below DTSC screening levels for keeping the soil onsite.

PARC Areas 2A, 2B and 2C:

A total of 13 soil borings were completed and sampled in these PARC areas.

- Title 22 metals, VOCs and SVOCs were non-detect or below DTSC screening levels in all samples except for one (1) sample from 65 ft. bgs in boring A-13-20 and one (1) sample from boring A-13-21 from 5 ft. bgs.
- Total Petroleum Hydrocarbons (TPH) in the gasoline carbon chain range was also detected exceeding the DTSC screening level in the boring A-13-21, 5 ft. bgs sample. The soils in the vicinity of the boring A-13-21 would classify as non-RCRA or California Hazardous Waste.
- Eleven (11) samples from the borings were tested for PCBs and results were ND.
- Nine (9) samples were tested for organochlorine pesticides and were each reported ND.
- Three (3) samples tested for organophosphorous pesticides were ND.
- Five (5) samples were tested for chlorinated herbicides and were ND.
- The baseline HHRA confirms the exceedance of TPH as gasoline toxic (non-cancer) risk in the area around boring A-13-21.

PARC Area 3:

One boring (A-13-23) was completed in this area and had no Title 22 metals detected above DTSC screening levels except for one sample at 50 ft. bgs, which had cadmium concentration above the screening level. TPH and VOCs were ND in the three (3) samples from the boring.

PARC Area 4A:

Two (2) borings were completed in this area.

- Only the 5.0 ft. bgs sample in boring R-13-04 had arsenic and cadmium exceeding the DTSC screening levels. The concentrations of arsenic and cadmium would classify the soil as non-RCRA or California Hazardous Waste.
- TPH and VOCs were ND except TPH as gasoline was detected at a very low concentration of 6 mg/kg in the 5.0 ft. bgs sample from boring R-13-03.

PARC Area 5:

Of the four (4) borings sampled in Area 5, two had detections of total lead above the DTSC screening level and to depths of 3.0 ft. bgs. The concentrations classify the soil as non-RCRA or California Hazardous Waste. Also, diesel range TPH was detected in the sample from 1.0 ft. bgs in both boring L-9 and L-10 but does not exceed the DTSC screening level for keeping the soil on site. The baseline HHRA indicates that TPH DRO slightly exceeds the unrestricted land use exposure risk criteria.

PARC Area 6:

A total of 36 soil sampling borings were completed in Area 6. As shown in Table 2, samples from borings in a large portion of this area had no exceedances of DTSC screening levels. Exceedances were found for some Title 22 metals in samples from borings 6-2, 6-4 and 6-5 at non-RCRA levels and in boring 6-3 at RCRA levels. The depths of contamination in these areas are estimated as 0.75 ft., 4.0 ft. and 2.0 ft. bgs,

respectively. Also, the east end of the area includes Parcels 18.1 and 18.2 which have multiple samples from many borings with heavy metals and various VOCs which classify the soil as RCRA Hazardous Waste. In Parcel 18.1, contamination was found in one boring (18.1-GP-1) extending to a depth of 6.5 ft. bgs. The baseline HHRA indicates:

- Cancer risk exceeds the criteria for residential and construction worker exposure scenarios driven by the concentrations of the PCB Arochlor 1260 detected in two (2) soil samples from two (2)borings.
- Toxicity risk exceeds criteria for both residential and construction worker exposure driven by TPH DRO and lead in soil samples.

PARC Area 7:

Borings for soil samples were completed at thirteen (13) locations. Samples from borings in the central portion of this area (7-1, 7-4, 7-5, and L-4) and at one location at the center of the north portion (boring 20-1) had heavy metals concentrations classifying the soil as non-RCRA or California Hazardous Waste. Also, soil gas exceedances were detected in soil vapor probes near the center and north portions of the site (see Section 14.3 below for further discussion). The baseline HHRA indicates concentration of TPH DRO in soil exceeds toxicity exposure levels in both residential and construction worker scenarios.

PARC Area 8:

Borings for soil samples were completed at five (5) locations. Three (3) locations (boring L-1, 8-1, and 8-3) had samples with concentrations reported above DTSC screening levels for lead. TCLP testing was performed on three (3) samples and the results classify the soil as non-RCRA or California Hazardous Waste.

PARC Area 9:

Three (3) borings were completed for ADL sampling (see Section 14.2 below for discussion of the results). One other boring was completed and sampled to 60 ft. bgs. One sample from 15.0 ft. bgs had cadmium exceeding the DTSC screening level.

14.1.3 Data Quality Assessment

Data Quality Assurance included acquiring representative samples of the subsurface soil, surface soil, groundwater and soil gases were acquired for analysis of potential contamination and the extent. Sampling acquisition, field screening, packing, preserving and transporting followed diligent Standard Operating Procedures (included in the SAP) to avoid sample disturbance, loss or mislabeling. Laboratory testing was performed by Advanced Technology Laboratories (ATL), which is certified by the State as qualified for performing the designated EPA test methods and with a QA/QC program.

14.1.4 Additional Investigations and/or Analysis

The following additional soil borings are recommended to better define the limits and categories of contamination:

- As areas adjacent to South Clarence and South Anderson Streets had contamination in borings located near the edge of the street, it is recommended that when locations of excavations extending under the pavements for installation or re-routing of utilities, drainage structures, etc., related to the PARC project construction are identified additional borings should be performed within the streets to investigate whether the contamination extends under the street pavement or the extent of contamination. Two (2) combination soil/soil vapor/methane probes are recommended in Area 1A to confirm the Design Level required for methane mitigation.

- Two (2) additional borings are recommended in Area 5 to better define the limits of contamination.
- Ten (10) additional borings are recommended in Area 6 to better define the limits of contamination and categories.
- Two (2) additional borings are recommended in Area 7 to better define the limits of contamination and categories.
- Two (2) additional combination soil borings/soil vapor probes are recommended in Area 8 to better define the limits of contamination and categories.

It is recommended that further exploration of the depth of contamination by heavy metals in Parcels 18.1 and 18.2 within PARC Area 6 be completed during excavation for removal/disposal of the soil. For example, this can be accomplished by using a backhoe to "pothole" the area immediately adjacent to boring GP-1(where the contamination was reported in the deepest sample at 6.5 ft. bgs) and taking samples from the bottom and sidewalls of the excavation for testing for the contaminants of concern.

Also, when excavations are completed for removal of contaminated soils, verification samples should be taken from the bottom and each sidewall of the excavations and tested for the contaminants of concern at each location.

14.2 FINDINGS AND RECOMMENDATIONS FOR AERIALLY DEPOSITED LEAD

This section applies to only Area 9 which is within Caltrans ROW and has proposed improvements as part of the PARC project.

14.2.1 Subsurface Conditions

The soils encountered during sampling were typically fine to coarse, brown, sandy silts to silty sands, with clay and fine to coarse gravel. The moisture content in the soils varied from dry to moist at different locations. Groundwater was not encountered in any of the ADL borings.

14.2.2 Analytical Laboratory Test Results

A summary of analytical laboratory test results is presented in Table 5 and statistical data of these test results are summarized in Table 6.

Total Lead

A total of ten (10) soil samples were tested for total lead using EPA test method 6010B. Total lead concentrations ranged from 1.7 mg/kg to 740 mg/kg with mean concentration of 37.65 mg/kg. The maximum total lead concentration was 740 mg/kg in the sample obtained at the depth of 0.5 feet bgs from boring 9-1.

Soluble Lead using Citric Acid Waste Extraction Test (CA-WET)

Samples with total lead more than 50 mg/kg were tested for CA-WET test. The soluble lead concentrations ranged from 1.0 to 50 milligram per liter (mg/L) with a mean concentration of 18.7 mg/L. Soluble lead concentrations exceeded the STLC of 5 mg/L in three (3) of the five (5) soil samples tested for soluble lead analysis.

Soluble Lead using Distilled Water Waste Extraction Test (DI-WET)

Five samples were tested for soluble lead concentrations using DI-WET test method. Soluble concentrations were less than the laboratory's practical quantitation limit (1.0 mg/L) in all the tested samples as shown in Table 5.

Toxicity Characteristic Leaching Procedure (TCLP)

Five (5) samples were analyzed using the EPA Toxic Characteristic Leaching Procedure (TCLP) for leachable lead. TCLP concentrations for lead were less than the laboratory's practical quantitation limit (0.25 mg/L) in all the tested samples as shown in Table 5 except the sample from 0.5 ft. bgs in boring 9-1 and the sample from 1.0 ft. bgs in boring 9-2 which had concentrations of 0.42 and 1.5 mg/L, respectively. These reported values are significantly below the level which would classify the soil as RCRA Hazardous Waste.

Hydrogen Ion Concentration (pH)

Two (2) samples were analyzed for pH concentration using EPA method 9045C and the reported values ranged from 6.8 to 7.6. All of the samples analyzed had reported pH concentrations greater than the criterion of 5.0 (listed in the DTSC variance); therefore, soil in these locations is not limited to reuse in covered areas.

14.2.3 Data Quality Assessment

Prior to submitting soil samples to the laboratory, the chain-of-custody documents were reviewed for accuracy and completeness. The laboratory reports were crosschecked with the chain-of-custody forms to confirm accurate transposing of sample information. Field and laboratory personnel implemented QA/QC procedures in conformance with the criteria specified in the SAP. Laboratory quality assurance and quality control (QA/QC) data (method blanks, laboratory control samples and duplicates, matrix spike samples and duplicates) were also reviewed for compliance with project's QA/QC objectives. Based on this validation process, the data contained herein are adequate for the purposes of this study. Copies of the laboratory reports and chain-of-custody forms are included as Appendix C.

14.2.4 Statistical Evaluation of ADL Impacted Soil Data

The field and laboratory data were analyzed to identify the appropriate handling of soil affected by ADL under the terms of the agreement between DTSC and Caltrans dated June 30, 2016 (http://www.dot.ca.gov/hq/env/haz/pdfs/adl/dtsc_ct_adlfinal_063016.pdf). The agreement is included in Appendix D and referred to here as ADL-Agreement, which applies to ADL-contaminated soil generated by Caltrans in the course of State highway projects, in all Caltrans districts, statewide. The variance applies to activities which include stockpiling, disposal, tracking, transportation and final placement of ADL-contaminated soil.

The ADL Agreement includes performing statistical analysis of the laboratory test results on soil samples. USEPA's statistical analysis package ProUCL v5.1.002 was used to perform the statistical evaluation. Statistical analysis was completed on the full depth sampling set. To assist in future soil handling and disposal, statistical evaluation was performed based on depth of the samples. The obtained results are explained in the following sections.

14.2.5 Applicability of ADL Agreement

Section 4.1.5 of the ADL-Agreement states the following:

"*4.1.5 ADL-contaminated soils with any of the following characteristics may not be managed under this Agreement and must be properly disposed of:*

4.1.5.1 Soils that are RCRA hazardous waste, including but not limited to soils exceeding the RCRA hazardous waste threshold for lead according to the Toxicity Characteristic Leaching Procedure (TCLP), USEPA Method 1311.

4.1.5.2 Soils that are non-RCRA hazardous waste, except soils whose sole hazardous constituent posing an unacceptable risk to human health or the environment is lead in concentrations not exceeding

3,200 mg/kg of total lead and not exceeding 150 mg/l of extractable lead based on a modified waste extraction test using deionized water as the extractant (DI WET).

4.1.5.3 Soil having a pH less than or equal to 5.0."

Clean soil is defined in the ADL-Agreement as follows:

"3.1.2 ***Clean Soil.*** *For purposes of this agreement, clean soil is defined as soil not containing total lead over 80 mg/kg based on a 95 percent UCL or soluble lead over 5 mg/L based on a 95 percent UCL as determined by the CA-WET and not containing other constituents at levels that would pose an unacceptable risk to human health or the environment or be unacceptable to the Regional Water Quality Control Board with jurisdiction."*

14.2.6 Requirements for Managing ADL-Contaminated Soils

The ADL-Agreement includes multiple requirements for managing ADL-Contaminated soil, which should be referred to by the construction contractors.

The ADL-Agreement includes the following table for determining minimum cover requirements for ADL-contaminated soil:

Table 7. Minimum Cover Requirements for ADL-contaminated Soil Based on Extractable and Total Lead Concentrations (95% UCL)*

Extractable Lead Concentration		Total Lead Concentration	Minimum Cover Requirement
Less than 5 mg/L CA-WET	and	Less than 320 mg/kg	No cover requirement
Greater than 5 mg/L CA-WET and equal to or below 1.5 mg/L DI-WET	or	Greater than 320 mg/kg but equal to or below 1600 mg/kg	One foot of clean soil**
Greater than 1.5 mg/L DI-WET but equal to or below 150 mg/L DI-WET	or	Greater than 1600 mg/kg but equal to or below 3200 mg/kg	Pavement structure
Greater than 150 mg/L DI-WET	or	Greater than 3200 mg/kg	Subject to full regulation as hazardous waste

* ADL-contaminated soil having a pH less than or equal to 5.0 may not be managed under this Agreement and must be properly disposed of.

** This is the minimum requirement. Such soil may alternatively be covered by a pavement structure.

The ADL-Agreement includes many other requirements for stockpiling and transporting of ADL-contaminated soil, dust control, Lead Compliance Plan, Health and Safety Plan, notification of the Public, and Project Closeout Report. The construction contractor should review and implement the requirements of the full ADL-Agreement.

14.2.7 Entire Data Set (0-5.0 ft. bgs)

Table 6 provides a summary of the 95 percent UCLs calculated for total lead and soluble lead concentrations (using CA-WET) reported for soil samples from the project site. Based on a comparison of the 95 percent UCL values generated by ProUCL, since the 95 percent UCL on mean total lead is 690.5 mg/kg and 95 percent mean STLC (CA-WET) of 46.8 mg/L is greater than 5 mg/L, the data set for total lead does not meet the definition of Clean Soil in the ADL Agreement.

A statistical analysis of soluble lead from DI-WET analyses was not performed since all DI-WET results were below the laboratory's detection limit (0.057 mg/L). However, since the maximum concentration is below the 1.5 mg/L DI-WET criterion for the ADL Agreement, the data set meets the requirement for a minimum of one foot of clean soil cover (alternatively the soil may covered by a pavement structure).

The pH was measured in two (2) samples and their reported values are 6.8 to 7.6. Therefore, since the pH was above 5.0 in all samples tested, the pH concentrations would not change the ADL soil classification.

Since results of total lead, DI-WET and TCLP analyses were below the respective 3,200 mg/kg, 150 mg/L and 5 mg/L regulatory thresholds, waste soils would not be considered RCRA (federal) hazardous.

14.2.8 Depth Specific Layers

The statistical parameters for each sampling depth from all the borings are summarized in Table 6. The cover requirement determination for each interval is provided on the table and as follows:

0-2.9 ft. depth: 1 feet of clean soil cover (alternatively the soil may be covered with pavement)

3.0-5.0 ft. depth: No cover required - soils classify as "Clean" per ADL Agreement

14.2.9 Conclusions and Recommendations

Variance

Soil below 2.9 ft. depth bgs is classified "Clean Soil" and can remain in place or if excavated and handled separately from soils below 2.9 ft. bgs the soils can either be released to the Contractor for unrestricted use on site, used on other Caltrans projects or disposed of as non-ADL contaminated/non-hazardous soil. Soil excavated and handled separately in the 0.0 to 2.9 ft. bgs depth range would require placement with 1 ft. of clean soil cover (alternatively the soil could be covered with pavement).

Should all soil in the 0.0 to 5.0 ft bgs depth range be excavated in mass (i.e. the if the soil in from 0.0 to 2.0 ft bgs is not excavated and handled separately from the soils below 2.0 ft. bgs) all the soil would need to be placed with a minimum one foot of clean soil cover (alternatively the soil could be covered with pavement)..

Two (2) soil samples tested had reported pH values at or above the variance criterion of 5.0. Therefore, soil tested within the Caltrans ROW does not contain a pH value below that which would affect to the DTSC Variance conditions.

Since offsite disposal may be required, the soil should be handled based on the criteria described in following section.

Waste Characterization

Based on the analytical results of this ADL Survey, soil samples collected at the 8 boring locations did not contain total lead in excess of the California TTLC of 3,200 mg/kg or extractable lead by DI-WET method in excess of 150 mg/L, therefore, the soil would not classify as being required to meet full hazardous waste regulations.

14.2.10 Additional Investigations and/or Analysis

None recommended.

14.3 FINDINGS AND RECOMMENDATIONS FOR SOIL GAS CONDITIONS

The EMI Phase I report concluded the following regarding soil gas impacts:

"Hazardous levels of soil gases were not detected in the vadose zone during drilling of hollow stem auger borings. High levels of combustible gas (>100% Lower Explosive Limit [LEL]) and hydrogen sulfide (200 ppm) were detected in borings A-13-01, A-13-08, and A-13-19 while drilling into groundwater. Boring A-13-21 showed 39% LEL after encountering groundwater. Both combustible gas and hydrogen sulfide (H2S) were non-detect in all of the other hollow-stem auger borings. The combustible gas (presumably methane) and hydrogen sulfide are probably due to reducing conditions in the groundwater, which may be naturally occurring or, in AOC-1, due to petroleum hydrocarbon contamination in the groundwater. The rate of hazardous gas production from groundwater is expected to be negligible except during agitation of the groundwater, as during drilling or high-volume pumping of groundwater. Open-hole drilling (as with a bucket or flight auger) into groundwater should be monitored for combustible gas and methane at the ground surface adjacent to the hole. VOC impacts in soil gas are low to very low except where significant soil or groundwater impacts are present."

The results of soil gas sampling and testing during HAI investigations of the Parcels of land within or immediately adjacent to the PARC Project limits and the Phase II PARC investigation recently completed by HAI are summarized in Tables 3 and 4. Based on the HHRA the areas with soil gas constituent concentrations exceeding the health risk criteria include PARC Areas 7 (PCE and TPH DRO) and 8 (PCE). The baseline HHRA (which calculated the attenuation factors for soil gas emissions) indicates that soil gas concentrations in Area 2A do not exceed the risk criteria in either the residential or construction worker exposure scenario (including excavations and trenching).

Based on these results PARC areas requiring mitigation for soil gas exceedances of Health Risk Screening Levels are highlighted on Figure 7. Mitigation alternatives and ROM costs are discussed in Section 15 below.

14.3.1 Additional Investigations and/or Analysis

Additional soil gas sampling and testing is recommended for completion in Areas 1A, 5, 6, 7 and 8. As previously discussed with Tetra Tech and the City, the DTSC Screening Levels for soil gas contaminants are generic and generally quite conservative. The additional sampling and a focused HHRA could potentially eliminate or reduce the need for soil gas remediation..

Should soil vapor extraction (SVE) be the preferred method of remediation, it is recommended that site-specific soil vapor extraction pilot tests be performed for conceptual design and improved estimation of the cost for remediation by SVE.

14.4 FINDINGS AND RECOMMENDATIONS REGARDING METHANE IN SOIL GAS

Since portions of the PARC project are located within the City of Los Angeles Methane and Methane Buffer Zone (see Figure 6) construction of facilities (buildings, underground vaults with access, and certain paved areas) within these areas must consider the requirements of the City of Los Angeles Ordinance 175790 and Division 71, Methane Seepage Regulations.

Sampling and testing for methane, hydrogen sulfide and pressure was performed in three (3) soil gas vapor wells installed at Parcel 32 in PARC Area 2B (see Figure 2a). Methane and hydrogen sulfide was not detected using field instrument (GEM 2000). Also, pressure testing on the three vapor wells resulted in zero indicated pressure. In addition, samples were obtained at depths of 5 to 15 ft. bgs at seven (7) locations during this Phase II investigation (see Figures 3a & 3b). The results are summarized in Table 4. Methane concentrations were reported by the laboratory as "Not Detected (ND)" for all samples except three (3) for which methane concentrations ranged from 21 to 260 parts per million by volume (ppmv). The latter concentration was reported in the sample from 15 ft. bgs in soil vapor probe 2A-2 in Area 2A. The data would classify the areas sampled or tested as Site Design Level I per Table 71, Minimum Methane

Mitigation Requirements of the Methane Seepage Regulations, except Area 2A which would classify as Design Level II.

According to the Exceptions to Table 71 buildings and paved areas within the Methane Buffer Zone with no measured pressure and with Design Level I or II do not require methane mitigation (reference section 91.7104.3.6 and 91.7104.4 of the Methane Seepage Regulations, respectively). This would apply to all of the PARC areas tested for methane except Area 1A (see Figure 6a) which is within the Methane Zone and portions of Area 7 where soil gases were detected and impervious surfaces are to be constructed adjacent to existing buildings. Any buildings (except naturally vented) to be constructed in Area 1A should have methane mitigation systems meeting Level II requirements Table 71 (involving membrane and passive venting) unless additional testing indicates no subsurface gas pressure and lower methane concentrations. Also, paved areas that are over 5,000 square feet in area and within 15 feet of the exterior wall of a commercial, industrial, institutional building, should be vented in accordance with the Methane Mitigation Standards, design Level II unless additional testing indicates no subsurface gas pressure and lower methane concentrations. Additional investigation and testing in these areas are recommended as described in Section 14.4.1 below.

14.4.1 Additional Investigations and/or Analysis

Additional testing for methane concentrations and subsurface pressure should be completed in accordance with the Division 71 Methane Seepage Regulations testing requirements should any buildings or paved areas over 5,000 sf be proposed in Area 1A and in Area 7 where methane was detected in this investigation.

Two (2) vapor/methane probes are recommended in Area 1A and three (3) vapor/methane probes are recommended to be completed in Area 7. In addition to methane concentration measurements the probes will be used to measure pressure in the soil gas.

14.5 RECOMMENDATIONS FOR HANDLING GROUNDWATER ENCOUNTERED DURING CONSTRUCTION

The EMI Phase I report concluded the following regarding groundwater impacts:
"Gasoline-range hydrocarbons, toluene, naphthalene, other aromatic VOCs, 1,4-dioxane, methyl isobutyl ketone, 1,1-dichloroethane, ethanol, and acetone were detected in the groundwater samples from wells A-13-01 and R-13-02. These impacts are probably the result of solvent releases from the BASF/Inmont facility at 590 South Santa Fe Avenue, with possible contributions from other nearby UST sites. Petroleum hydrocarbon and MTBE impacts were detected in groundwater samples from wells A13-08 and R-13-10. Petroleum hydrocarbon and VOC concentrations exceed the screening levels for groundwater discharges to surface waters (including via the storm sewer) in four of the five wells sampled. In addition, the nickel concentration in one sample slightly exceeded the screening level. Treatment will be required for groundwater discharged to the storm sewer or surface water from construction dewatering on this project. If the quantity of groundwater to be generated is expected to be small, the groundwater may be transported to a recycler via tank truck rather than discharged under an National Pollutant Discharge Elimination System (NPDES) permit."
Also, groundwater within the PARC limits near the Metro 20 site has been impacted by contaminants leaking from underground structures previously located on the MTA site. Therefore, it is recommended that all groundwater generated during construction be containerized, sampled and tested for all contaminants included in Screening Levels For General Permits, Los Angeles Regional Water Quality Control Board (LARWQCB) Order No. R4-2013-0095, NPDES No. CAG994004 - Discharge of Groundwater from Construction and Project Dewatering to Surface Waters, Attachment E to determine appropriate disposal. If the test results do not meet the discharge criteria, the water should be transported under manifest to an appropriate treatment/disposal facility. A California Hazardous Waste Identification Number will be required prior to transporting the water. The selected facility may require additional testing prior to accepting the water.

14.5.1 Additional Investigations and/or Analysis

It is recommended that all groundwater generated during construction be containerized, sampled and tested for all contaminants included in Screening Levels for General Permits, LARWQCB Order No. R4-2013-0095, NPDES No. CAG994004 - Discharge of Groundwater from Construction and Project Dewatering to Surface Waters, Attachment E to determine appropriate disposal. If the test results do not meet the discharge criteria, the water should be transported under manifest to an appropriate treatment/disposal facility. A California Hazardous Waste Identification Number will be required prior to transporting the water. The selected facility may require additional testing prior to accepting the water.

15.0 REMEDIATION ALTERNATIVES AND ROUGH ORDER OF MAGNITUDE COST ESTIMATES

15.1 REMEDIATION ALTERNATIVES

The remediation alternatives considered are for the following categories:

- Category 1: Soil with Heavy Metals Concentrations or PCB concentrations above RCRA Hazardous Waste Levels:
    a. With No Soil Gas Contaminants Exceeding DTSC Screening Levels
    b. With Soil Gas Contaminants Exceeding DTSC Screening Levels (NO CONDITIONS WERE FOUND MEETING THIS CATEGORY)
- Category 2: Soil with Heavy Metals Concentrations and/or TPH GRO above DTSC Health Risk Screening Levels but At or Below RCRA Hazardous Waste Levels:
    a. With No Soil Gas Contaminants Exceeding DTSC Screening Levels
    b. With Soil Gas Contaminants Exceeding DTSC Screening Levels
- Category 3: Soil with Soil Gas Contaminants above DTSC Health Risk Screening Levels but No Heavy Metals or Other Hazardous Material Content
- Category 4: Soil with ADL Concentrations Exceeding the Caltrans/DTSC Agreement "Clean Soil" Definition

Remediation alternatives considered feasible for each Category include:

- Category 1a (RCRA Level Heavy Metals, PCB or TPH DRO Only):
  Excavate and Dispose at Class 1 Hazardous Waste Landfill
- Category 2a (Heavy Metals and/or TPH DRO at Non-RCRA Levels Only):
  Excavate and Dispose of Soil at Class 2 Landfill as Non-RCRA Hazardous Waste
- Category 2b (Heavy Metals and/or TPH DRO at Non-RCRA Levels and VOCs in Soil Gas):
  Excavate and Dispose of Soil at Class 2 Landfill as Non-RCRA Hazardous Waste and Install SVE System and Optional Perimeter Vertical Barrier/Liner
- Category 3 (VOCs in Soil Gas but No Heavy Metals or TPH DRO in Soil)):
  Excavate and Dispose of Soil as RCRA Hazardous Waste at Class 1 Landfill OR Install SVE System and Optional Perimeter Vertical Barrier/Liner OR Design and Install Subsurface Gas Mitigation Systems for Proposed Development Facilities
- Category 4 (Soil with ADL):
  Provide Clean Soil Cover or Pavement Cover per the Caltrans/DTSC ADL Agreement

Brief descriptions of each alternative follow:

Category 1a (RCRA Level Heavy Metals, TPH DRO and/or PCBs Only):

Remediation by Excavation and Disposal of the Soil at Appropriate Hazardous Materials Facility

This remediation approach would involve excavation of the soil to the limits designated on Figure 8a and 8b for each PARC Area and transport of the soil under manifest to a facility approved for disposal of RCRA Hazardous Waste. A site-specific EPA Hazardous Waste Generator Identification Number would need to be obtained and manifests completed by the licensed transporter. Additional sampling and testing would likely be required by the facility accepting the soil for disposal. For excavations deeper than 4 feet, shoring or other approved means would be required to maintain stability of the excavation walls. During excavation, the site would need to have dust control and runoff controls to prevent windborne or surface waterborne migration of the soil from the site. The soils would need to be directly loaded into the transport trucks which would require tarps to prevent spillage or windblown loss of soil during transport. These controls would need to be verified and monitored by an independent third party. A site-specific Health and Safety Plan would need to be prepared and implemented during all field work including full time perimeter sampling and testing of particulate/dust from the site. All onsite workers and supervisors would have to have completed a 40-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) training course and be equipped with the appropriate personal protective equipment. Finally, the excavation would need to be backfilled with certified clean soil meeting the design specifications of the PARC project.

Category 2a (Heavy Metals and/or TPH DRO at Non-RCRA Levels Only):
Excavate and Dispose of Soil at Class 2 Landfill as Non-RCRA Hazardous Waste

This remediation approach would involve excavation of the soil to the limits designated on Figures 8a and 8b for each PARC Area and transport of the soil under manifest to a facility approved for disposal of Non-RCRA Hazardous Waste. A California EPA Non-RCRA Hazardous Waste Generator Identification Number would need to be obtained and manifests completed by the licensed transporter. Additional sampling and testing would likely be required by the facility accepting the soil for disposal. For excavations deeper than 4 feet, shoring or other approved means would be required to maintain stability of the excavation walls. During excavation, the site would need to have dust control and runoff controls to prevent windborne or surface waterborne migration of the soil from the site. The soils would need to be directly loaded into the transport trucks which would require tarps to prevent spillage or windblown loss of soil during transport. These controls would need to be verified and monitored by an independent third party. A site-specific Health and Safety Plan would need to be prepared and implemented during all field work including full time perimeter sampling and testing of particulate/dust from the site. All onsite workers and supervisors would have to have completed a 40-hour OSHA HAZWOPER training course and be equipped with the appropriate personal protective equipment. Finally, the excavation would need to be backfilled with certified clean soil meeting the geotechnical specifications of the PARC project.

Category 2b: (Heavy Metals and/or TPH DRO at Non-RCRA Levels and VOCs in Soil Gas):
Excavate and Dispose of Soil at Class 2 Landfill as Non-RCRA Hazardous Waste and Install SVE System and Optional Perimeter Vertical Barrier/Liner

In addition to the procedures described above for Category 2a the sites with conditions of Category 2b would also require the following due to the VOCs in soil gases:

1. Emission controls such as water spray or application of foam agents to all exposed soil surfaces and/or large spark free fans to clear the area of emitting VOCs. Full time monitoring would be required to verify that the controls prevent the VOCs from impacting workers or the public and the controls and monitoring would need to comply with South Coast Air Quality Management District (SCAQMD) Rule 1166 and a Mitigation Management Plan would need to be approved by SCAQMD.
2. A detailed Health and Safety plan would need to be prepared and implemented during all excavation and transport.

3. The excavation and transport/disposal of the soil would require permitting and approval by the Certified Unified Program Agencies (CUPA), Cal EPA/DTSC and SCAQMD. A detailed Work Plan/Remedial Action Plan would need to be prepared and submitted to these agencies for review and approval. SCAQMD requires submittal and approval of a Mitigation Plan for potential VOC emissions during excavation under their Rule 1166. A site-specific EPA Hazardous Waste Generator Identification Number would need to be obtained and manifests completed by the licensed transporter.
4. A soil vapor extraction system would be required to be designed and installed to remove and treat VOCs in the soil gases. If Health Risk Assessments indicate the need, a vertical barrier/line would be installed around the perimeter of the area to prevent soil gases with VOCs from migrating back into the area. Gases migrating from below the clean backfill or deeper depths would be extracted through the SVE slotted wells and treated by the SVE treatment system. Treatment for VOCs typically involves carbon filtration unless hydrogen sulfide is detected in the gas stream. Operating and maintenance procedures for the SVE system and permit applications would need to be prepared and approved by the oversight agency and SCAQMD.
5. Design and implementation of a "Pilot Study" to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to size the final SVE system components.
6. Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) for submittal to and approval by the CUPA and/or CalEPA/DTSC.
7. Solicitation of Bids for construction and implementation of the remediation.
8. Implementation and monitoring of the SVE. This may require several months to over a year.
9. Reporting to the agencies with documentation that the SVE has reached the specified clean up goals.
10. Finally, the excavation would need to be backfilled with certified clean soil meeting the geotechnical specifications of the PARC project.

Category 3 (VOCs in Soil Gas but No Heavy Metals):
Alternative 1-- Excavate and Dispose of Soil as RCRA Hazardous Waste at Class 1 Landfill and Install Liner and/or SVE System;
Alternative 2-- Installation and Operation of SVE System and Optional Perimeter Vertical Barrier/Liner; OR
Alternative 3-- Design and Installation of Subsurface Gas Mitigation Systems for Proposed Development Facilities

Three alternatives are considered feasible for this category remediation including 1) excavation and disposal of the soil as RCRA Hazardous Waste and installation of a liner on the bottom and side walls of the excavation and an SVE system, 2) installation and operation of soil vapor extraction system, and 3) design and installation of subsurface gas mitigation systems for proposed development facilities. The first alternative is the same as described above for Category 2b. The perimeter vertical barrier/liner system would function to prevent a return of the contaminated soil gases to the subject area, i.e. the soil gases would not migrate from surrounding areas into the clean backfill. Gases migrating from below the clean backfill or deeper depths would be extracted through the SVE slotted wells and treated by the SVE treatment system. Treatment for VOCs typically involves carbon filtration unless hydrogen sulfide is detected in the gas stream.

The excavation alternative (Alternative 1) would involve removal of the soil containing contaminants to a depth of up to 15 ft. or more. Shoring of the excavation walls would be necessary. A liner would be installed on the bottom of the excavation to prevent contaminated soil gas from re-entering the backfill. The side walls would have gas migration mitigated by either installation of a vertical liner placed on the side walls

of the excavation or SVE wells installed vertically outside the limits of the excavation after backfilling is done. The backfill soil would need to be certified clean fill and placement would need to meet the PARC project geotechnical specifications. During the process the site would require strict emissions controls and monitoring.

The SVE treatment method (Alternative 2) utilizes extraction and monitoring wells (In Situ Method) or excavation and encapsulation of impacted soils in above ground piles with horizontal slotted piping (On Site Method), a vacuum pump or pumps, and carbon filtration units to extract and remove VOCs from the soil gas. The process would require several steps as follows:

1. Design and implementation of a "Pilot Study" to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to size the final SVE system components.
2. Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) for submittal to and approval by the CUPA and CA EPA/DTSC.
3. Solicitation of Bids for construction and implementation of the remediation.
4. Implementation and monitoring of the SVE. This may require several months to over a year.
5. Reporting to the agencies with documentation that the SVE has reached the specified clean up goals.

The third alternative, Design and Installation of Subsurface Gas Mitigation Systems for Proposed Development Facilities, mitigates the impact of the VOCs and/or methane and hydrogen sulfide by precluding soil gases migration from the subsurface soil and intrusion into structures or other facilities and surface emissions. The approach has been utilized at hundreds of public and private facilities in Los Angeles including those located in the Methane Zone (where structures are at risk of methane and hydrogen sulfide migration from underlying natural oil/gas field deposits) where such systems have continued successfully to protect human health and the environment for many years (Reference Los Angeles Unified School District [LAUSD] Schools in the Methane Zone). Depending on the type of soil gases and pressure in the soil gas, the systems can include several of the following components:

- Shallow excavation (3-4 ft. bgs) to allow installation of the mitigation components (some of the soil would be used to backfill trenches)
- Gravel layers and slotted piping for gas collection
- Liner installation above the slotted piping and extending side wide
- Vacuum pumps for gas extraction or air injection blowers
- Filtration systems to remove VOCs and/or hydrogen sulfide from the gas stream
- Geomembrane barriers placed beneath concrete slabs and/or foundations or fill areas
- Installation of automated and/or manual monitoring systems.

More detail on design and operation of these mitigation systems can be found in Division 71, Methane Seepage Regulation and associated Standard Plans.

We have made the comparison of the Category 3 alternatives as shown in the following table. The relative scoring is based on general experience with these remediation or mitigation processes in the Los Angeles and Southern California areas. The scores are on a scale of 1 to 10, with 10 being the best.

Table 8. Relative Scoring Comparison of Feasible Remediation/Mitigation Alternatives

Criteria	Alt. 1 Excavation/SVE Alternative	Alt. 2 SVE Treatment System	Alt. 3 Subsurface Gas Mitigation	Comments
Design Difficulty	8	7	8	**Alt. 1 requires vertical liners on sidewalls**
Permitting Ease	6	8	8	**Many projects are using Alt. 2 and 3 in LA area**
Requirement for Specialty Contracting	8	7	6	**Many qualified contractors for Alt. 2 and 3 in LA area**
Time to Implement	8	6	4	**SVE can require over 12 to 18 months, Alt. 3 can require very long- term OM&M**
Risk	3	8	5	**Excavation/transport poses more risk to exposure of workers and public. Both Alt 2 and 3 require evidence of successful treatment of emissions**
Potential Conflicts with Site Use	9	8	4	**SVE wells require access and protection. Alt. 3 restricts excavations for utilities, landscaping**
Relative ROM Cost	1	7	9	**Excavation/Disposal as RCRA Haz Waste is High Cost**
Total Score	43	51	44	

The comments indicate key reasons on alternative were given a better score than the other. Based on this comparison, the SVE Treatment system was selected for use in the ROM cost estimates for Category 3. A primary reason for the selection is the reduced conflict with PARC facilities and the finite period for completion of remediation compared to the subsurface gas mitigation alternative and the much lower cost as compared to the removal and disposal alternative.

Category 4 (Soil with ADL Only):
Provide Clean Soil Cover or Pavement Cover per the Caltrans/DTSC ADL Agreement

Category 4 mitigation is discussed above in Section 14.2 regarding soils containing ADL and in Caltrans ROW. The results indicate that the soils above a depth of approximately 2.9 ft. bgs would require one foot of clean soil cover to remain on site per the Caltrans/DTSC ADL Agreement.

15.2 SELECTION OF REMEDIATION ALTERNATIVE FOR EACH PARC AREA

The categories of contamination for each PARC Area or portions thereof are presented below and on Figures 7a and 7b. The lateral limits of contamination were limited to the boundary of the each PARC Area or estimated to be approximately at the mid-point distance between contaminated borings or gas probes and adjacent uncontaminated borings or gas probes in each applicable direction. The areas of contamination in each PARC Area or portion and Category were estimated from the Figures 7a and 7b. Depths of contamination were estimated in each PARC Area or portion thereof as described below. The Areas of Concern with contamination and depths are shown on Figures 8a and 8b.

PARC Area 1A (West, Central and East Portions)

Category 2a: Soils in a portion of this area have heavy metals (cadmium, chromium and lead) exceeding DTSC Health Risk Screening levels to depths of ranging from 1 to 3.5 ft. bgs while samples at 5.0 ft. bgs did not have exceedances. For remediation estimates the depth of contamination was assumed to be as shown on Figure 8a and Table 9 for each sub-zone. As discussed above the area is in the Methane Zone and recommendations regarding this were presented above in Section 14.4.

Area 2A Northeast Corner:

Category 2b: This portion of Area 2A contained non-RCRA levels of heavy metals in sample at 5.0 ft. bgs (for volume and cost estimates a depth of contamination of 6.0 ft. bgs was used).

Area 4A Southern Portion: NO WORK IN THIS AREA IS INVOLVED WITH THE PARC PROJECT SO NO REMEDIATION IS PROPOSED HEREIN)

Category 2a: This portion of Area 4A had non-RCRA levels of arsenic and cadmium to 5ft. bgs in the one boring completed in the portion. For volume and cost estimates the depth of contamination was assumed to be 6.0 ft. bgs.

Area 5 Central Portion:

Category 2a: This portion of the area has heavy metals at non-RCRA Hazardous or California Hazardous Waste levels in samples at 2.0 and 3.0 ft. bgs. A depth of contamination of 4.0 ft. bgs was assumed for volume and cost estimates.

Area 6 Portion around Borings 6-2:

Category 2a: Due to heavy metals at non-RCRA levels in the sample from 0.5 ft. bgs. For volume and cost estimates a depth of 0.75 ft. bgs was used since the sample at 1.0 ft. bgs did not have heavy metals exceeding the screening levels.

Area 6 Portion around Boring 6-3:

Category 1a: Due to heavy metals at RCRA levels to depths of 3.0 ft. bgs in samples. Since the samples at 5.0 ft. bgs did not have exceedance of screening levels a depth of 4.0 ft. bgs was used in volume and cost estimates.

Area 6 Portion around Boring 6-4 and 6-5:

Category 2a: Due to non-RCRA levels of heavy metals in sample at 1.0 ft. bgs. Because samples at 3.0 ft. bgs did not have heavy metals exceedances a depth of contamination of 2.0 ft. bgs was used in volume and cost estimates.

Area 6 (Parcels 18.1 and 18.2):

Category 1a: Due to heavy metals at RCRA Hazardous Waste levels in many samples from 1.0 to 3.5 ft. bgs. A depth of 3.5 ft. and 4.5 ft. bgs was used for volume and cost estimates.

Area 7 North Portion

Category 3: Due to soil gas contamination only.

Area 7 North Central Portion

Category 2b: Due to both non-RCRA levels of lead and soil gas contamination.

Area 7 Central Portion:

Category 2b: Due to presence of both soil gas contaminants (Parcel 22) and heavy metals and TPH exceeding DTSC screening levels but metals are below RCRA Haz Waste levels. The depth of contamination used for volume and cost estimates was 2.0 ft. bgs with the added assumption that the TPH exceedance is localized to the near vicinity of boring 7-4 and can be removed by a limited "potholing" operation.

Area 7 East Portion:

Category 2b: Borings within this portion of Area 7 did not contain soil contaminants exceeding DTSC screening levels. However, soil gas contaminants (VOCs) at concentrations exceeding DTSC screening levels were detected in vapor probes installed in the area (i.e. Parcel 22).

Area 8 East Portion:

Category 3: Due to soil gas contamination only.

Area 8 West Portion:

Category 2b: Due to both soil gas exceedances of DTSC screening levels and heavy metals in soil (non-RCRA level). A depth of 4.0 ft. bgs was used for volume and cost estimates.

15.3 ROUGH ORDER OF MAGNITUDE COST ESTIMATE FOR REMEDIATION

The ROM cost estimates for each PARC Area or portion thereof are presented in Table 9. Unit rates were taken from the references in the notes. Other relevant assumptions are provided at the bottom of the table. Areas of each PARC Area were estimated using Figures 7a and 7b. Depths of soil contamination were estimated as discussed above in Section 15.2. Pavement removal costs for excavations for remediation have not been included as the areas and conditions of pavement have not been completely defined.

The estimate range of -20% to +25% is typical for these types of estimates which are not based on designs and contractor quotes. **It is recommended that the estimates be upgraded when designs are completed and utilizing contractor quotes.**

A comparison of results of screening the soil sample and soil gas sample data using DTSC/ California Office of Environmental Health Hazard Assessment (OEHHA) commercial (CSL) and unrestricted land use (RSL) Human Health Risk Screening Levels was completed. The attached Tables 10 and 11 present the results. The blue highlighted entries indicate that the concentration is between the RSL and CSL. In some instances, the same sample or samples at the same depth in nearby borings had concentrations exceeding the CSL. We have reviewed the results and looked at other factors to develop the following comments. Some areas (including a portion of Area 2, Area 5, the portion of Area 6 near boring 6-2, reduced depth of remediation in Area 6 near boring 6-3, and a small portion of Parcel 18.1 in Area 6) of the Project would have less or no remediation required if CSLs were used for the evaluation. It is roughly estimated that the use of RSLs would add approximately 8-10% to the overall Project remediation cost.

16.0 LIMITATIONS

The observations and conclusions given above are the professional opinions of Hushmand Associates, Inc. based on our observations and on reasonably ascertainable information supplied by government agencies, other records sources, laboratories, and the client. This report was prepared in accordance with the standards of practice commonly used by environmental professionals in this area. No other warranty, express or implied, of any kind is made or intended in connection with this report, or by the fact you are being furnished this report, or by any other oral or written statement.

TABLES

Table 1. List of Soil Borings and Soil Vapor Probes (Current Data Gap Investigation)

Soil Boring / Vapor Probe ID	Proposed Depth (ft)	Completed Depth (ft)	Description	Notes
1A-1	5.0	5.0	Soil sampling only	
1A-2	5.0	5.0	Soil sampling only	
1A-3	5.0	5.0	Soil sampling only	
1A-4	5.0	5.0	Soil sampling only	
1B-1	5.0	5.0	Soil sampling only	
2A-1	15.0	15.0	Soil sampling to 5 ft. bgs; Soil Vapor sampling at 5ft., 10 ft., 15 ft. bgs	
2A-2	15.0	15.0	Soil sampling to 5 ft. bgs; Soil Vapor sampling at 5ft., 10 ft., 15 ft. bgs	
2A-3	15.0	15.0	Soil Vapor sampling only	
5-1	3.0	3.0	Soil sampling only	
5-2	3.0	3.0	Soil sampling only	
6-1	5.0	5.0	Soil sampling only	
6-2	5.0	5.0	Soil sampling only	
6-3	5.0	5.0	Soil sampling only	
6-4	5.0	5.0	Soil sampling only	
6-5	5.0	5.0	Soil sampling only	
6-6	7.5	7.5	Soil sampling only	
6-7	7.5	7.5	Soil sampling only	
6-8	7.5	7.5	Soil sampling only	
6-9	7.5	7.5	Soil sampling only	
6-10	7.5	7.5	Soil sampling only	
7-1	5.0	5.0	Soil sampling to 5 ft. bgs; Soil Vapor sampling at 5 ft. bgs	Could not obtain soil samples at 3 ft. bgs and below due to hard soil conditions. Tried three times to sample but unsuccessful.
7-2	5.0	5.0	Soil sampling only	
7-3	5.0	5.0	Soil sampling to 5 ft bgs; Soil Vapor sampling at 5ft. bgs	
7-4	5.0	5.0	Soil sampling only	
7-5	5.0	5.0	Soil sampling only	
7-6	5.0	5.0	Soil sampling only	
7-7	5.0	5.0	Soil sampling only	
8-1	5.0	5.0	Soil sampling only	
8-2	5.0	5.0	Soil sampling only	
8-3	5.0	5.0	Soil sampling to 5 ft bgs; Soil Vapor sampling at 5ft. bgs	
9-1	5.0	5.0	Soil sampling only	
9-2	5.0	1.2	Soil sampling only	Refusal at 1.2 ft. bgs due to a concrete slab extending several foot.
9-3	5.0	5.0	Soil sampling only	

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Table 2. Summary of Laboratory Test Results - Soil Samples

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																												pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
1A & 1B	1A-1	1A-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	3.8	-	2.1	-	-	200	-	-	ND	1.9	ND	ND	17	2.9	5.6	230	-	-	860	51	-	3.6	0.91	-	-	ND	11	ND	ND	ND	23	240	-	-	-	-	-	-	-
		1A-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	99	-	-	ND	ND	-	-	9.7	-	5.1	46	-	-	230	9.9	-	ND	ND	ND	ND	20	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1A-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	3.3	-	1.3	-	-	97	-	-	ND	ND	-	-	19	ND	4.8	100	-	-	440	11	-	1.3	0.12	-	-	1.2	8.4	ND	ND	ND	19	170	-	-	-	-	-	-	-
		1A-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	33	-	-	ND	ND	-	-	4.4	-	3.5	4.5	-	-	1.1	-	-	-	ND	-	-	ND	2.8	ND	ND	ND	14	15	-	-	-	-	-	-	-
	1A-2	1A-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.3	-	-	310	-	-	ND	ND	-	-	15	-	6.3	50	-	-	310	26	-	ND	0.45	-	-	ND	11	ND	ND	ND	25	480	-	-	-	-	-	-	-
		1A-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	1.2	-	-	63	-	-	ND	ND	-	-	7.9	-	5.5	9.2	-	-	15	-	-	-	0.2	-	-	ND	5.8	ND	ND	ND	22	45	-	-	-	-	-	-	-
		1A-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	39	-	-	ND	ND	-	-	4.9	-	3.7	4.2	-	-	1.1	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	17	16	-	-	-	-	-	-	-
		1A-2-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	1.7	-	-	120	-	-	ND	ND	-	-	13	-	9.0	18	-	-	3.2	-	-	-	0.17	-	-	ND	9.9	ND	ND	ND	26	45	-	-	-	-	-	-	-
	1A-3	1A-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.2	-	-	120	-	-	ND	ND	-	-	15	-	6.1	48	-	-	140	5.9	-	ND	0.18	-	-	ND	9.2	ND	ND	ND	23	130	-	-	-	-	-	-	-
		1A-3-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	130	-	-	ND	ND	-	-	11	-	6.5	26	-	-	130	7.1	-	ND	0.2	-	-	ND	10	ND	ND	ND	27	150	-	-	-	-	-	-	-
		1A-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	68	-	-	ND	ND	-	-	7.7	-	5.4	6.9	-	-	1.5	-	-	-	ND	-	-	ND	5.1	ND	ND	ND	20	25	-	-	-	-	-	-	-
		1A-3-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	35	-	-	ND	ND	-	-	4.7	-	3.4	3.9	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	14	17	-	-	-	-	-	-	-
	1A-4	1A-4-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	3.4	-	-	100	-	-	ND	ND	-	-	15	-	6.8	43	-	-	140	5.1	-	ND	0.22	-	-	ND	11	ND	ND	ND	26	210	-	-	-	-	-	-	-
		1A-4-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	83	-	-	ND	ND	-	-	14	-	8.0	16	-	-	4.2	-	-	-	ND	-	-	ND	9.0	ND	ND	ND	29	39	-	-	-	-	-	-	-
		1A-4-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	66	-	-	ND	ND	-	-	9.0	-	6.6	11	-	-	1.9	-	-	-	ND	-	-	ND	6.3	ND	ND	ND	24	29	-	-	-	-	-	-	-
		1A-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	55	-	-	ND	ND	-	-	7.7	-	5.7	7.7	-	-	1.7	-	-	-	ND	-	-	ND	5.4	ND	ND	ND	19	26	-	-	-	-	-	-	-
	L7	L-7 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	3.5	-	3.7	-	-	150	-	-	ND	3.4	-	-	17	-	5.4	100	-	-	290	15	-	-	0.2	-	-	ND	13	ND	ND	ND	24	200	-	-	-	-	-	-	-
		L-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L8	L-8 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	2.1	-	-	91	-	-	ND	ND	-	-	9.9	-	5.2	15	-	-	32	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	25	59	-	-	-	-	-	-	-
		L-8 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-8 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-11	L-11 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	3.9	-	8.8	-	-	600	-	-	ND	3.1	-	-	25	-	6.6	170	-	-	690	41	-	-	3.3	ND	-	ND	21	ND	ND	ND	27	1500	-	-	-	-	-	-	-
		L-11 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	1.8	-	-	73	-	-	ND	ND	-	-	8	-	4.6	9.8	-	-	2.5	-	-	-	0.1	-	-	ND	6.1	ND	ND	ND	21	30	-	-	-	-	-	-	-
		L-11 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-12	L-12 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	2.7	-	-	85	-	-	ND	ND	-	-	8.4	-	4.7	15	-	-	76	6	-	-	0.13	-	-	ND	6.5	ND	ND	ND	22	76	-	-	-	-	-	-	-
		L-12 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L7	L-7 @ 1'	02/26/2016	1.0	ND	63	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-7 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	3	-	-	100	-	-	ND	ND	-	-	14	-	8.2	19	-	-	3.9	-	-	-	0.1	-	-	ND	10	ND	ND	ND	36	42	-	-	-	-	-	-	-
		L-7 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1.6	-	-	61	-	-	ND	ND	-	-	8.3	-	4.8	12	-	-	5.4	-	-	-	ND	-	-	ND	6	ND	ND	ND	22	29	-	-	-	-	-	-	-
	L8	L-8 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-8 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	ND	-	-	33	-	-	ND	ND	-	-	4.1	-	1.9	3.8	-	-	1.3	-	-	-	0.19	-	-	ND	2.5	ND	ND	ND	11	13	-	-	-	-	-	-	-
		L-8 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	ND	-	-	37	-	-	ND	ND	-	-	4.7	-	2.4	3.8	-	-	1.2	-	-	-	ND	-	-	ND	2.9	ND	ND	ND	15	15	-	-	-	-	-	-	-
	L-11	L-11 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-11 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	ND	-	-	42	-	-	ND	ND	-	-	5.2	-	3	4.7	-	-	1.4	-	-	-	ND	-	-	ND	4	ND	ND	ND	14	19	-	-	-	-	-	-	-
		L-11 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1	-	-	48	-	-	ND	ND	-	-	5.3	-	3	5.6	-	-	3.3	-	-	-	ND	-	-	ND	4.1	ND	ND	ND	14	20	-	-	-	-	-	-	-
	L-12	L-12 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-12 @ 2'	02/26/2016	2.0	ND	110	-	-	ND	ND	ND	-	ND	-	-	45	-	-	ND	ND	-	-	4.6	-	2.6	4.5	-	-	4.9	-	-	-	ND	-	-	ND	3.3	ND	ND	ND	14	19	-	-	17 (Arochlor 1260)	2.9 (4,4' - DDT [2C])	-	-	-
		L-12 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	ND	-	-	35	-	-	ND	ND	-	-	4	-	2.2	3.4	-	-	1	-	-	-	ND	-	-	ND	2.7	ND	ND	ND	12	14	-	-	-	-	-	-	-
	1B-1	1B-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.9	-	-	86	-	-	ND	ND	-	-	13	-	5.2	8.3	-	-	6.6	-	-	-	ND	-	-	4.4	8.4	ND	ND	ND	25	29	-	-	-	-	-	-	-
		1B-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	84	-	-	ND	ND	-	-	15	-	7.5	8.8	-	-	4.4	-	-	-	ND	-	-	3.3	12	ND	ND	ND	30	31	-	-	-	-	-	-	-
		1B-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	50	-	-	ND	ND	-	-	6.3	-	4.0	6.4	-	-	4.3	-	-	-	ND	-	-	ND	3.9	ND	ND	ND	18	24	-	-	-	-	-	-	-
		1B-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	1.3	-	-	69	-	-	ND	ND	-	-	8.4	-	5.5	9.7	-	-	19	-	-	-	0.19	-	-	ND	6.0	ND	ND	ND	21	32	-	-	-	-	-	-	-
	A-13-01	A01@5'	08/21/2013	5.0	6.9	ND	ND	ND	ND	-	ND	-	1.3	-	-	67	-	-	ND	1.2	-	-	9.8	-	5.6	12	-	-	8.2	-	-	-	0.069	-	-	ND	6.8	ND	ND	ND	27	41	-	-	-	-	-	-	-
		A01@30'	08/21/2013	30.0	35	18	ND	53	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@50'	08/21/2013	50.0	25	28	ND	55	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@60'	08/21/2013	60.0	ND	ND	ND	ND	9.2 (1,2,4-Trimethylbenzene)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@65'	08/21/2013	65.0	ND	ND	17	17	790,000 (Toluene) 15,000 (Ethylbenzene) 110,000 (Total Xylenes) 15,000 (Sec-Butylbenzene) 29,000 (n-Butylbenzene) 25,000 (Isopropylbenzene) 130,000 (n-Propoylbenzene) 870,000 (1,2,4-Trimethylbenzene) 220,000 (1,3,5-Trimethylbenzene)	-	ND	-	0.62	-	-	29	-	-	ND	ND	-	-	4	-	ND	3.5	-	-	ND	-	-	-	ND	-	-	ND	ND	ND	ND	ND	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@80'	08/21/2013	80.0	ND	ND	ND	ND	500 (Toluene) 420 (1,2,4-Trimethylbenzene)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2A, 2B, 2C	2A-1	2A-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	160	-	-	ND	ND	-	-	8.8	-	4.2	12	-	-	7.6	-	-	-	ND	-	-	ND	9.4	ND	ND	ND	19	46	-	-	-	-	-	-	-
		2A-1-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	84	-	-	ND	ND	-	-	11	-	7.3	12	-	-	6.3	-	-	-	ND	-	-	ND	7.8	ND	ND	ND	27	36	-	-	ND	ND	-	-	ND
		2A-1-3.0	05/15/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	42	-	-	ND	ND	-	-	5.5	-	4.1	5.7	-	-	5.8	-	-	-	ND	-	-	ND	3.7	ND	ND	ND	15	23	-	-	-	-	-	-	-
		2A-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	1.0	-	-	90	-	-	ND	ND	-	-	7.7	-	2.8	5.5	-	-	10	-	-	-	ND	-	-	ND	4.8	ND	ND	ND	14	14	-	-	-	-	-	-	-
	2A-2	2A-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.9	-	-	85	-	-	ND	ND	-	-	8.8	-	5.6	18	-	-	28	-	-	-	ND	-	-	ND	7.5	ND	ND	ND	22	48	-	-	-	-	-	-	-
		2A-2-1.0	05/15/2017	1.0	ND	18	-	-	ND	ND	ND	-	1.4	-	-	59	-	-	ND	ND	-	-	8.1	-	5.3	8.4	-	-	6.5	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	21	31	-	-	ND	ND	-	-	ND
		2A-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	49	-	-	ND	ND	-	-	6.6	-	4.5	6.7	-	-	2.6	-	-	-	ND	-	-	ND	4.6	ND	ND	ND	18	23	-	-	-	-	-	-	-
		2A-2-5.0	05/15/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	58	-	-	ND	ND	-	-	8.6	-	5.5	6.9	-	-	1.2	-	-	-	ND	-	-	ND	5.1	ND	ND	ND	22	22	-	-	-	-	-	-	-
	P33-B1	MC-1	08/15/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	71	-	-	ND	ND	-	-	11	-	5	11	-	-	2.4	-	-	-	ND	-	-	ND	7.1	ND	ND	ND	21	33	-	-	ND	ND	ND	ND	ND
		MC-2	08/15/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	2.1	-	-	140	-	-	ND	1.3	ND	-	15	-	8.5	23	-	-	4.7	-	-	-	0.12	-	-	ND	11	ND	ND	ND	38	52	-	-	-	-	-	-	-
		MC-3	08/15/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	136	-	-	ND	ND	-	-	3.3	-	2.9	3.8	-	-	ND	-	-	-	ND	-	-	ND	2.7	ND	ND	ND	11	15	-	-	-	-	-	-	-
	P33-B2	MC-1	08/7/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	33	-	-	ND	ND	-	-	4.4	-	2.4	4.5	-	-	1.1	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	11	17	-	-	-	-	-	-	-
		MC-2	08/7/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	130	-	-	ND	1.4	ND	-	17	-	8.6	22	-	-	3.9	-	-	-	0.11	-	-	ND	12	ND	ND	ND	41	60	-	-	-	-	-	-	-
		MC-3	08/7/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	23	-	-	ND	ND	-	-	3	-	2.1	5.3	-	-	1	-	-	-	0.9	-	-	ND	2.2	ND	ND	ND	10	16	-	-	-	-	-	-	-
		MC-4	08/7/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	40	-	-	ND	ND	-	-	4.8	-	2.1	4	-	-	ND	-	-	-	ND	-	-	ND	2.3	ND	ND	ND	7.6	14	-	-	-	-	-	-	-
	P33-B3	MC-1	08/7/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	35	-	-	ND	ND	-	-	5.1	-	2.9	5.4	-	-	1.3	-	-	-	ND	-	-	ND	3.6	ND	ND	ND	14	19	-	-	-	-	-	-	-
		MC-2	08/7/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	1.7	-	-	120	-	-	ND	1.6	ND	-	18	-	8.8	23	-	-	4.5	-	-	-	ND	-	-	ND	13	ND	ND	ND	41	60	-	-	-	-	-	-	-
		MC-3	08/7/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	27	-	-	ND	ND	-	-	3.5	-	2	3.5	-	-	ND	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	7.5	12	-	-	-	-	-	-	-
		MC-4	08/7/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	54	-	-	ND	ND	-	-	8.5	-	4.3	7.8	-	-	1.4	-	-	-	ND	-	-	ND	5.3	ND	ND	ND	20	26	-	-	-	-	-	-	-
		MC-5	08/7/2015	12.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.3	-	2.1	6.1	-	-	1.5	-	-	-	0.13	-	-	ND	2.2	ND	ND	ND	7.3	13	-	-	-	-	-	-	-
	P33-B4	MC-1	08/7/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	1	-	-	89	-	-	ND	ND	-	-	11	-	5.7	13	-	-	3	-	-	-	ND	-	-	ND	8.1	ND	ND	ND	25	38	-	-	ND	ND	ND	ND	ND
		MC-2	08/7/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	58	-	-	ND	ND	-	-	8	-	4.1	8.2	-	-	1.6	-	-	-	ND	-	-	ND	5.5	ND	ND	ND	17	26	-	-	ND	-	-	-	-
		MC-3	08/7/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.1	-	2	2.6	-	-	ND	-	-	-	ND	-	-	ND	1.9	ND	ND	ND	5.7	9.3	-	-	ND	-	-	-	-
		MC-4	08/7/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	20	-	-	ND	ND	-	-	2.7	-	1.5	2.4	-	-	ND	-	-	-	3.4	-	-	ND	1.7	ND	ND	ND	6.5	11	-	-	-	-	-	-	-
	P32-B1	MC-1	08/12/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	50	-	-	ND	ND	-	-	6.3	-	3.2	6	-	-	1.2	-	-	-	ND	-	-	ND	4.1	ND	ND	ND	16	21	-	-	ND	ND	ND	ND	ND
		MC-2	08/12/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	35	-	-	ND	ND	-	-	5.1	-	2.5	5.9	-	-	1.5	-	-	-	0.12	-	-	ND	3.4	ND	ND	ND	14	18	-	-	-	-	-	-	-
		MC-3	08/12/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	23	-	-	ND	ND	-	-	3.6	-	2	4.9	-	-	1.2	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	9.6	14	-	-	-	-	-	-	-
		MC-4	08/12/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	38	-	-	ND	ND	-	-	5.6	-	3.7	5.6	-	-	1.1	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	17	19	-	-	-	-	-	-	-
	P32-B2	MC-1	08/12/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	58	-	-	ND	ND	-	-	8.3	-	4.1	7.4	-	-	1.8	-	-	-	ND	-	-	ND	5.3	ND	ND	ND	19	26	-	-	-	-	-	-	-
		MC-2	08/12/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	1.1	-	-	52	-	-	ND	ND	-	-	8	-	3.9	10	-	-	2.5	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	18	26	-	-	-	-	-	-	-
		MC-3	08/12/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	32	-	-	ND	ND	-	-	4.2	-	2.3	4	-	-	1.2	-	-	-	ND	-	-	ND	2.7	ND	ND	ND	11	15	-	-	-	-	-	-	-
		MC-4	08/12/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	1.3	-	-	55	-	-	ND	ND	-	-	7.9	-	4.2	10	-	-	2.2	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	17	23	-	-	-	-	-	-	-
	RR-B1	MC-1	08/25/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	44	-	-	ND	ND	-	-	6.1	-	3.4	7.6	-	-	2.4	-	-	-	ND	-	-	ND	4.4	ND	ND	ND	15	22	-	-	ND	ND	-	-	ND
		MC-2	08/25/2015	5.0	ND	17	43	-	ND	ND	ND	-	ND	-	-	53	-	-	ND	ND	-	-	7.7	-	4.2	10	-	-	3.6	-	-	-	ND	-	-	ND	5.3	ND	ND	ND	19	27	-	-	-	-	-	-	-
		MC-3	08/25/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	1.2	-	-	64	-	-	ND	ND	-	-	9.4	-	4.9	12	-	-	5.9	-	-	-	ND	-	-	ND	6.3	ND	ND	ND	22	33	-	-	-	-	-	-	-
		MC-4	08/25/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	1.1	-	-	52	-	-	ND	ND	-	-	7.9	-	4	8.9	-	-	5.5	-	-	-	ND	-	-	ND	5.4	ND	ND	ND	20	28	-	-	-	-	-	-	-
		MC-5	08/25/2015	15.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	37	-	-	ND	ND	-	-	5.1	-	2.7	4.6	-	-	ND	-	-	-	ND	-	-	ND	3.3	ND	ND	ND	15	17	-	-	-	-	-	-	-
	RR-B2	MC-1	08/25/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	46	-	-	ND	ND	-	-	6	-	3.5	6.2	-	-	1.2	-	-	-	ND	-	-	ND	4.3	ND	ND	ND	17	22	-	-	ND	ND	-	-	ND
		MC-2	08/25/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	86	-	-	ND	ND	-	-	11	-	6.1	11	-	-	2.4	-	-	-	ND	-	-	ND	8.2	ND	ND	ND	26	42	-	-	-	-	-	-	-
		MC-3	08/25/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	30	-	-	ND	ND	-	-	4.2	-	2.7	4.7	-	-	1.2	-	-	-	ND	-	-	ND	2.9	ND	ND	ND	10	15	-	-	-	-	-	-	-
		MC-4	08/25/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.4	-	1.4	2.9	-	-	1	-	-	-	ND	-	-	ND	1.7	ND	ND	ND	6.2	12	-	-	-	-	-	-	-
		MC-5	08/25/2015	15.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	32	-	-	ND	ND	-	-	4.6	-	2.5	4.7	-	-	1.1	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	11	16	-	-	-	-	-	-	-

Table 2. Summary of Laboratory Test Results - Soil Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																												pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
	RR-B3	MC-1	08/25/2015	2.5	ND	13	23	-	ND	ND	ND	-	2.3	-	-	150	-	-	ND	ND	-	-	12	-	4.1	14	-	-	41	-	-	-	0.18	-	-	ND	8.9	ND	ND	ND	19	42	-	-	-	ND	ND	-	-
		MC-2	08/25/2015	5.0	ND	12	15	-	ND	ND	ND	-	3.7	-	-	140	-	-	ND	ND	-	-	16	-	5.9	24	-	-	44	-	-	-	0.23	-	-	ND	15	ND	ND	ND	25	93	-	-	-	ND	ND	-	-
		MC-3	08/25/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	2.5	-	-	130	-	-	ND	ND	-	-	17	-	6.1	21	-	-	24	-	-	-	0.18	-	-	ND	13	ND	ND	ND	30	66	-	-	-	-	-	-	-
		MC-4	08/25/2015	10.0	ND	12	31	-	ND	ND	ND	-	1.1	-	-	55	-	-	ND	ND	-	-	8.3	-	3.6	10	-	-	7.5	-	-	-	0.12	-	-	ND	5.1	ND	ND	ND	15	29	-	-	-	-	-	-	-
		MC-5	08/25/2015	15.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	50	-	-	ND	ND	-	-	5.3	-	2.7	5.4	-	-	1.4	-	-	-	ND	-	-	ND	3.6	ND	ND	ND	13	21	-	-	-	-	-	-	-
		MC-6	08/25/2015	20.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	43	-	-	ND	ND	-	-	4.9	-	2.5	6	-	-	2	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	11	19	-	-	-	-	-	-	-
	R-13-02	R02@5'	08/21/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	1.5	-	-	68	-	-	ND	1.2	-	-	11	-	5.3	13	-	-	ND	-	-	-	0.078	-	-	ND	7.5	ND	ND	ND	31	37	-	-	-	-	-	-	-
		R02@45'	08/21/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R02@65'	08/21/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	1.2	-	-	190	-	-	ND	1	-	-	8.3	-	3.5	35	-	-	ND	-	-	-	0.048	-	-	9.6	5.8	ND	ND	ND	21	37	-	-	-	-	-	-	-
	A-13-19	A19@5'	08/22/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	14	-	-	ND	ND	-	-	ND	-	ND	51	-	-	ND	-	-	-	0.058	-	-	ND	ND	ND	ND	ND	ND	66	-	-	-	-	-	-	-
		A19@35'	08/22/2013	35.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A19@45'	08/22/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A19@60'	08/22/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A19@80'	08/22/2013	80.0	ND	ND	ND	ND	ND	-	ND	-	2.1	-	-	55	-	-	ND	1.2	-	-	7.3	-	4	14	-	-	ND	-	-	-	0.05	-	-	9.6	4.6	ND	ND	ND	21	38	-	-	-	-	-	-	-
	A-13-20	A20@5'	09/23/2013	5.0	14	2.4	ND	16	ND	-	ND	-	ND	-	-	82	-	-	ND	1.7	-	-	12	-	6.8	16	-	-	35	-	-	-	0.097	-	-	ND	9	ND	ND	ND	33	110	-	-	-	-	-	-	-
		A20@25'	09/23/2013	25.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A20@65'	09/23/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	4.6	-	-	93	-	-	ND	3.2	-	-	12	-	6.4	16	-	-	ND	-	-	-	ND	-	-	12	9	ND	ND	ND	32	54	-	-	-	-	-	-	-
	A-13-21	A21@5'	09/20/2013	5.0	370	50	11	430	ND	-	ND	-	6	-	-	83	-	-	ND	2.7	-	-	16	-	6	250	-	-	170	-	-	-	0.12	-	-	ND	18	ND	ND	ND	25	160	-	-	-	-	-	-	-
		A21@35'	09/20/2013	35.0	13	19	1.9	33	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A21@65'	09/20/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	8.6	-	-	110	-	-	ND	ND	-	-	5.2	-	ND	3.6	-	-	ND	-	-	-	0.028	-	-	110	ND	ND	ND	ND	26	8.1	-	-	-	-	-	-	-
3	A-13-23	A23@5'	09/11/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	42	-	-	ND	ND	-	-	11	-	3.7	8	-	-	ND	-	-	-	0.07	-	-	ND	5.5	ND	ND	ND	21	27	-	-	-	-	-	-	-
		A23@20'	09/11/2013	20.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A23@50'	09/11/2013	50.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	51	-	-	ND	2.3	-	-	16	-	5.3	8.6	-	-	3	-	-	-	0.037	-	-	ND	5.3	ND	ND	ND	57	26	-	-	-	-	-	-	-
4	R-13-03	R03@5'	11/6/2013	5.0	6	ND	ND	ND	ND	-	ND	-	ND	-	-	34	-	-	ND	ND	-	-	5.6	-	ND	6	-	-	ND	-	-	-	0.028	-	-	ND	3.1	ND	ND	ND	14	16	-	-	-	-	-	-	-
		R03@45'	11/6/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R03@55'	11/6/2013	55.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	46	-	-	ND	ND	-	-	ND	-	ND	5.6	-	-	ND	-	-	-	ND	-	-	ND	ND	ND	ND	ND	16	36	-	-	-	-	-	-	-
	R-13-04	R04@5'	11/4/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	13	-	-	92	-	-	ND	3.1	-	-	9.3	-	12	35	-	-	3.4	-	-	-	0.054	-	-	ND	19	ND	ND	ND	110	79	-	-	-	-	-	-	-
		R04@40'	11/4/2013	40.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	90	-	-	ND	1.2	-	-	14	-	7.4	24	-	-	ND	-	-	-	0.026	-	-	ND	11	ND	ND	ND	31	53	-	-	-	-	-	-	-
		R04@60'	11/4/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	5-1	5-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.5	-	-	72	-	-	ND	ND	-	-	7.9	-	5.6	12	-	-	20	-	-	-	ND	-	-	ND	6.6	ND	ND	ND	21	46	-	-	-	-	-	-	-
		5-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	2.1	-	-	84	-	-	ND	ND	-	-	10	-	5.3	19	-	-	68	4.8	-	ND	ND	-	-	ND	7.6	ND	ND	ND	22	99	-	-	-	-	-	-	-
		5-1-2.0	05/15/2017	2.0	-	-	-	-	-	-	ND	-	4.7	-	-	42	-	-	ND	ND	-	-	6.0	-	4.9	23	-	-	110	3.7	-	ND	0.11	-	-	ND	7.0	ND	ND	ND	18	130	-	-	-	-	-	-	-
		5-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	30	-	-	ND	ND	-	-	4.2	-	3.2	3.8	-	-	2.2	-	-	-	0.14	-	-	ND	2.7	ND	ND	ND	14	16	-	-	-	-	-	-	-
	5-2	5-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	4.1	-	-	75	-	-	ND	ND	-	-	15	-	8.5	20	-	-	48	-	-	-	ND	-	-	ND	14	ND	ND	ND	29	60	-	-	-	-	-	-	-
		5-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	52	-	-	ND	ND	-	-	5.9	-	4.5	9.6	-	-	19	-	-	-	ND	-	-	ND	5.0	ND	ND	ND	18	77	-	-	-	-	-	-	-
		5-2-2.0	05/15/2017	2.0	-	-	-	-	-	-	ND	-	ND	-	-	57	-	-	ND	ND	-	-	6.1	-	4.8	5.9	-	-	2.3	-	-	-	ND	-	-	ND	4.5	ND	ND	ND	17	23	-	-	-	-	-	-	-
		5-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	1.1	-	-	21	-	-	ND	ND	-	-	3.2	-	3.2	4.3	-	-	180	ND	-	ND	0.12	-	-	ND	4.0	ND	ND	ND	8.5	10	-	-	-	-	-	-	-
	L-9	L-9 @ 1'	02/12/2016	1.0	ND	190	-	-	ND	ND	2.3	-	3.4	-	-	72	-	-	ND	ND	-	-	7.9	-	4.4	20	-	-	64	-	-	-	ND	-	-	ND	7.3	ND	ND	ND	24	75	-	-	-	-	-	-	ND
		L-9 @ 2.5'	02/12/2016	2.5	-	-	-	-	ND	-	ND	-	2.2	-	-	44	-	-	ND	ND	-	-	6.3	-	2.9	7	-	-	16	-	-	-	ND	-	-	ND	4.3	ND	ND	ND	24	27	-	-	-	-	-	-	-
	L-10	L-10 @ 1'	02/12/2016	1.0	ND	260	-	-	ND	ND	ND	-	5	-	-	120	-	-	ND	ND	-	-	10	-	5	19	-	-	44	-	-	-	0.25	-	-	1.1	9.2	ND	ND	ND	23	68	-	-	-	-	-	-	ND
		L-10 @ 3'	02/12/2016	3.0	-	-	-	-	ND	-	ND	-	2.8	-	-	58	-	-	ND	ND	-	-	8.1	-	3.6	10	-	-	20	-	-	-	ND	-	-	ND	6.0	ND	ND	ND	22	47	-	-	-	-	-	-	-
6	6-1	6-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.5	-	-	69	-	-	ND	ND	-	-	6.0	-	3.3	7.2	-	-	11	-	-	-	0.14	-	-	ND	4.3	ND	ND	ND	14	28	-	-	-	-	-	-	-
		6-1-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	1.4	-	-	77	-	-	ND	ND	-	-	6.2	-	3.7	8.5	-	-	13	-	-	-	ND	-	-	ND	6.7	ND	ND	ND	15	33	-	-	-	ND	ND	-	ND
		6-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	70	-	-	ND	ND	-	-	8.2	-	6.6	7.4	-	-	3.3	-	-	-	ND	-	-	ND	6.1	ND	ND	ND	23	32	-	-	-	-	-	-	-
		6-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	66	-	-	ND	ND	-	-	8.1	-	6.3	6.5	-	-	1.2	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	24	28	-	-	-	-	-	-	-
	6-2	6-2-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	2.9	-	-	110	-	-	ND	ND	-	-	5.5	-	2.7	6.8	-	-	90	ND	-	ND	0.33	-	-	ND	3.2	ND	ND	ND	15	62	-	-	-	ND	ND	-	ND
		6-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	ND	-	1.2	-	-	87	-	-	ND	ND	-	-	8.2	-	5.7	15	-	-	38	-	-	-	0.78	-	-	ND	8.0	ND	ND	ND	26	89	-	-	-	-	-	-	-
		6-2-3.0	05/16/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	29	-	-	ND	ND	-	-	3.7	-	2.6	2.5	-	-	1.2	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	11	13	-	-	-	-	-	-	-
		6-2-5.0	05/16/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	34	-	-	ND	ND	-	-	2.9	-	2.8	3.0	-	-	1.2	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	10	14	-	-	-	-	-	-	-
	6-3	6-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	46	-	-	ND	ND	-	-	5.8	-	9.1	-	-	-	ND	-	-	-	ND	-	-	ND	3.5	ND	ND	ND	14	28	-	-	-	-	-	-	-
		6-3-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	8.3	-	11	-	-	1,900	3.2	ND	ND	12	ND	0.99	69	3.0	9.2	250	33	-	4,300	270	-	7.3	0.44	-	-	ND	31	1.0	ND	ND	22	10,000	1,100	-	-	ND	ND	-	ND
		6-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	1.6	-	-	160	-	-	ND	ND	-	-	8.7	-	3.5	21	-	-	250	ND	-	ND	ND	-	-	ND	5.0	ND	ND	ND	11	660	-	-	-	-	-	-	-
		6-3-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.1	-	2.3	2.4	-	-	1.1	-	-	-	0.4	-	-	ND	1.9	ND	ND	ND	12	13	-	-	-	-	-	-	-
	6-4	6-4-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.3	-	-	95	-	-	ND	ND	-	-	6.2	-	3.2	13	-	-	30	-	-	-	0.17	-	-	ND	5.6	ND	ND	ND	15	55	-	-	-	-	-	-	-
		6-4-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	26	1.1	ND	71	-	-	ND	1.2	-	-	11	-	4.6	41	-	-	94	5.4	-	ND	ND	-	-	ND	8.4	ND	ND	ND	19	960	-	-	-	ND	ND	-	ND
		6-4-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	11	-	-	41	-	-	ND	ND	-	-	6.3	-	4.2	7.1	-	-	16	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	18	32	-	-	-	-	-	-	-
		6-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	9.0	-	-	69	-	-	ND	ND	-	-	11	-	7.5	11	-	-	3.2	-	-	-	ND	-	-	ND	7.0	ND	ND	ND	29	59	-	-	-	-	-	-	-
	6-5	6-5-0.5	05/15/2017	0.5	-	-	-	-	-	-	4	-	9.1	-	-	95	-	-	ND	2.3	ND	ND	19	5.0	7.6	82	-	-	400	1.9	-	ND	0.17	-	-	ND	12	ND	ND	ND	21	950	-	-	-	-	-	-	-
		6-5-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	3.9	-	-	75	-	-	ND	ND	-	-	10	-	6.7	13	-	-	59	1.9	-	1.8	ND	-	-	ND	6.9	ND	ND	ND	27	83	-	-	-	-	-	-	-
		6-5-3.0	05/15/2017	3.0	ND	ND	-	-	ND	ND	ND	-	1.0	-	-	31	-	-	ND	ND	-	-	4.5	-	3.2	3.8	-	-	2.4	-	-	-	0.11	-	-	ND	2.8	ND	ND	ND	14	17	-	-	-	ND	ND	-	ND
		6-5-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	22	-	-	ND	ND	-	-	3.3	-	2.3	2.5	-	-	1.1	-	-	-	1.5	-	-	ND	2.0	ND	ND	ND	9.2	13	-	-	-	-	-	-	-
	6-6	6-6-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	1.1	-	-	120	-	-	ND	ND	-	-	15	-	8.3	13	-	-	12	-	-	-	0.12	-	-	ND	12	ND	ND	ND	34	45	-	-	-	-	-	-	-
		6-6-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	30	-	-	ND	ND	-	-	3.3	-	2.6	3.0	-	-	1.2	-	-	-	ND	-	-	ND	2.5	ND	ND	ND	10	13	-	-	-	-	-	-	-
		6-6-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	52	-	-	ND	ND	-	-	4.3	-	3.0	4.0	-	-	1.1	-	-	-	ND	-	-	ND	3.0	ND	ND	ND	14	14	-	-	-	-	-	-	-
		6-6-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	32	-	-	ND	ND	-	-	7.5	-	3.8	4.1	-	-	1.2	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	21	17	-	-	-	-	-	-	-
	6-7	6-7-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	55	-	-	ND	ND	-	-	7.5	-	5.3	6.1	-	-	3.0	-	-	-	ND	-	-	ND	5.4	ND	ND	ND	22	26	-	-	-	-	-	-	-
		6-7-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	25	-	-	ND	ND	-	-	3.7	-	2.7	3.2	-	-	2.0	-	-	-	0.12	-	-	ND	2.3	ND	ND	ND	12	14	-	-	-	-	-	-	-
		6-7-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	24	-	-	ND	ND	-	-	4.3	-	2.3	3.6	-	-	7.5	-	-	-	ND	-	-	ND	2.8	ND	ND	ND	12	29	-	-	-	-	-	-	-
		6-7-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	62	-	-	ND	ND	-	-	8.6	-	6.0	7.1	-	-	4.3	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	25	33	-	-	-	-	-	-	-
	6-8	6-8-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	5.0	-	-	100	-	-	ND	ND	-	-	7.5	-	4.5	97	-	-	140	3.6	-	0.28	0.1	-	-	ND	6.1	ND	ND	ND	21	210	-	-	-	-	-	-	-
		6-8-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	25	-	-	ND	ND	-	-	3.9	-	2.7	3.0	-	-	1.0	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	15	13	-	-	-	-	-	-	-
		6-8-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	47	-	-	ND	ND	-	-	6.3	-	4.8	4.3	-	-	1.4	-	-	-	ND	-	-	ND	4.0	ND	ND	ND	23	21	-	-	-	-	-	-	-
		6-8-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	17	-	-	ND	ND	-	-	1.7	-	1.8	ND	-	-	ND	-	-	-	4.6	ND	ND	ND	1.3	ND	ND	ND	7.2	10	-	-	-	-	-	-	-
	6-9	6-9-1.0	05/15/2017	1.0	-	-	-	-	ND	-	ND	-	ND	-	-	79	-	-	ND	ND	-	-	10	-	6.4	17	-	-	33	-	-	-	0.19	-	-	ND	9.1	ND	ND	ND	32	61	-	-	-	-	-	-	-
		6-9-3.0	05/15/2017	3.0	-	-	-	-	7.6 (TCE)	-	47	ND	9.4	-	-	110	-	-	ND	1.1	-	-	10	-	4.6	390	31	-	3,100	32	-	6.5	1.4	-	-	ND	12	ND	1.7	ND	18	510	-	-	-	-	-	-	-
		6-9-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	81	-	-	ND	ND	-	-	8.1	-	5.5	41	-	-	41	-	-	-	0.2	-	-	ND	8.7	ND	ND	ND	23	56	-	-	-	-	-	-	-
		6-9-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	78	-	-	ND	ND	-	-	9.9	-	7.7	8.8	-	-	3.4	-	-	-	0.2	-	-	ND	7.0	ND	ND	ND	29	36	-	-	-	-	-	-	-
	6-10	6-10-1.0	05/15/2017	1.0	-	-	-	-	7.1 (TCE)	-	ND	-	ND	-	-	110	-	-	ND	ND	-	-	11	-	6.8	24	-	-	99	14	-	ND	0.29	-	-	ND	7.5	ND	ND	ND	27	92	-	-	-	-	-	-	-
		6-10-3.0	05/15/2017	3.0	-	-	-	-	7.2 (TCE)	-	5.5	-	6.5	-	-	380	-	-	ND	1.8	ND	ND	15	-	3.2	160	-	-	800	360	-	410	0.19	-	-	ND	9.4	ND	ND	ND	14	2,100	-	-	-	-	-	-	-
		6-10-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	8.6	-	-	57	-	-	ND	ND	-	-	9.0	-	3.5	37	-	-	13	-	-	-	ND	-	-	ND	5.0	ND	ND	ND	17	31	-	-	-	-	-	-	-
		6-10-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	38	-	-	38	-	-	ND	ND	-	-	4.8	-	3.6	3.2	-	-	1.2	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	16	17	-	-	-	-	-	-	-
	16-5	16-5 @ 1'	02/12/2016	1.0	ND	18	-	-	ND	ND	ND	-	2	-	-	56	-	-	ND	ND	-	-	6.6	-	3.5	8.4	-	-	19	-	-	-	ND	-	-	ND	4.7	ND	ND	ND	20	40	-	-	-	-	-	-	ND
		16-5 @ 3'	02/12/2016	3.0	-	-	-	-	ND	-	ND	-	2.1	-	-	55	-	-	ND	ND	-	-	7.1	-	3.5	9.4	-	-	19	-	-	-	0.15	-	-	ND	5.1	ND	ND	ND	21	39	-	-	-	-	-	-	-
		16-5 @ 4'	02/12/2016	4.0	-	-	-	-	ND	-	ND	-	2.3	-	-	59	-	-	ND	ND	-	-	8.4	-	3.7	8.8	-	-	21	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	23	42	-	-	-	-	-	-	-
	16-6	16-6 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	2.4	-	-	55	-	-	ND	ND	-	-	6.3	-	3.5	8	-	-	11	-	-	-	0.1	-	-	ND	4.8	ND	ND	ND	21	36	-	-	-	-	-	-	-
		16-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16-7	16-7 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	78	-	-	ND	ND	-	-	10	-	5.1	14	-	-	6.1	-	-	-	0.12	-	-	ND	8.2	ND	ND	ND	25	38	-	-	-	-	-	-	-
		16-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	1.6	-	-	55	-	-	ND	ND	-	-	6.8	-	4	7.3	-	-	4.3	-	-	-	ND	-	-	ND	5.2	ND	ND	ND	20	26	-	-	-	-	-	-	-
		16-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5	L-5 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.8	-	-	46	-	-	ND	ND	-	-	5.5	-	3.2	8.4	-	-	25	-	-	-	ND	-	-	ND	4.2	ND	ND	ND	17	32	-	-	-	-	-	-	-
		L-5 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-5 @ 4.5'	02/1/2016	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5	L-5 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-5 @ 2'	02/26/2016	2.0	ND	ND	-	-	ND	930 (Phenol)	ND	-	ND	-	-	46	-	-	ND	ND	-	-	5.6	-	3.2	6.9	-	-	2.7	-	-	-	ND	-	-	ND	3.9	ND	ND	ND	18	23	-	-	-	ND	ND	-	-
		L-5 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	ND	-	-	30	-	-	ND	ND	-	-	3.9	-	2.2	2.8	-	-	ND	-	-	-	ND	-	-	ND	2.5	ND	ND	ND	14	14	-	-	-	-	-	-	-
	L-6	L-6 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	10	-	-	130	-	-	ND	ND	-	-	15	-	5.1	64	-	-	200	11	-	-	0.15	-	-	ND	12	ND	ND	ND	26	310	-	-	-	-	-	-	-
		L-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-6 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2. Summary of Laboratory Test Results - Soil Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M)) TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg	VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A) Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L	pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
6	L-6	L-6 @ 1'	02/26/2016	1.0	ND	**6600**	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240 (Arochlor 1260)	ND	-	-
		L-6 @ 2'	02/26/2016	2.0	ND	ND	-	-	ND	460 (Phenol)	ND	-	**26**	-	-	93	-	-	ND	ND	-	-	10	-	6	10	-	-	5.8	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	28	53	-	-	-	ND	ND	-	-
		L-6 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	**17**	-	-	48	-	-	ND	ND	-	-	5.5	-	3.3	5	-	-	2.4	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	17	24	-	-	-	-	-	-	-
	18.1-GP-1	GP-1 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	73	-	-	ND	ND	-	-	11	-	4.5	19	ND	0.053	**53**	**6.1**	-	0.81	0.55	-	-	ND	12	ND	ND	ND	19	85	-	-	-	-	-	-	-
		GP-1 @ 2'	04/1/2016	2.0	-	-	480	480	-	-	ND	-	2.4	-	-	160	-	-	ND	1.6	-	-	10	-	4.3	23	ND	ND	**74**	3.6	-	0.17	0.75	-	-	ND	8.9	ND	ND	ND	22	230	-	-	-	-	-	-	-
		GP-1 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	ND	-	1.8	-	-	70	-	-	ND	ND	-	-	8	-	3.8	15	ND	ND	34	ND	-	ND	0.12	-	-	ND	7.6	ND	ND	ND	22	62	-	-	-	-	-	-	-
		GP-1 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	ND	-	1	-	-	41	-	-	ND	ND	-	-	5.5	-	3	4.7	ND	ND	1.6	ND	-	ND	ND	-	-	ND	3.9	ND	ND	ND	18	20	-	-	-	-	-	-	-
		GP-1 @ 6.5'	04/1/2016	6.5	-	-	29	29	-	-	7.3	-	2.2	-	-	100	-	-	ND	ND	-	-	8.8	-	3.5	44	1.7	ND	**170**	**15**	-	0.35	1.1	-	-	ND	15	ND	ND	ND	19	290	-	-	-	-	-	-	-
	18.1-GP-2	GP-2 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	69	-	-	ND	ND	-	-	6.8	-	3.4	12	ND	ND	44	3.4	-	ND	1.3	-	-	ND	5.5	ND	ND	ND	19	100	-	-	-	-	-	-	-
		GP-2 @ 2'	04/1/2016	2.0	-	-	-	-	-	-	ND	-	ND	-	-	**2100**	-	-	ND	ND	-	-	38	-	ND	**1400**	**98**	7.4	**8300**	**950**	-	**98**	0.67	-	-	ND	47	ND	ND	ND	29	**8300**	-	-	-	-	-	-	-
		GP-2 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	ND	-	2	-	-	65	-	-	ND	ND	-	-	8.3	-	3.8	23	1.1	4.3	**71**	2.8	-	**16**	0.35	-	-	ND	7.6	ND	ND	ND	21	70	-	-	-	-	-	-	-
		GP-2 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	ND	-	ND	-	-	49	-	-	ND	ND	-	-	6.2	-	3.6	7.1	ND	ND	1.5	ND	-	ND	ND	-	-	ND	4.2	ND	ND	ND	22	24	-	-	-	-	-	-	-
	18.1-GP-3	GP-3 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	**40**	-	**17**	-	-	350	-	-	ND	ND	-	-	24	-	6.1	**370**	**26**	0.27	**1600**	**88**	-	3.8	**98**	-	-	ND	19	ND	ND	ND	31	1500	-	-	-	-	-	-	-
		GP-3 @ 2'	04/1/2016	2.0	-	24	1000	1000	-	-	ND	-	3.3	-	-	67	-	-	ND	ND	-	-	6.4	-	3.4	18	ND	ND	**62**	2.3	-	ND	0.11	-	-	ND	6.1	ND	ND	ND	19	92	-	-	-	-	-	-	-
		GP-3 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	ND	-	1.2	-	-	42	-	-	ND	ND	-	-	5.8	-	3.1	5.4	ND	ND	1.4	ND	-	ND	ND	-	-	ND	3.7	ND	ND	ND	20	20	-	-	-	-	-	-	-
		GP-3 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	ND	-	ND	-	-	44	-	-	ND	ND	-	-	4.6	-	2.8	4.4	ND	ND	1.5	ND	-	ND	ND	-	-	ND	3.2	ND	ND	ND	16	19	-	-	-	-	-	-	-
	18.1-1	18.1-1-1	10/22/2015	1.0	10	10	162	230	<various	-	<0.758	-	2	-	-	97.5	-	-	<0.253	**1.78**	-	-	10.4	-	6.34	23.8	-	-	**61.1**	3.77	-	-	0.182	-	-	0.779	13.8	<0.758	<0.253	<0.758	20.1	112	-	-	-	-	-	-	-
		18.1-1-3.5	10/22/2015	3.5	5	5.8	43	54	<various	-	<0.769	-	<0.769	-	-	63.9	-	-	<0.256	0.96	-	-	6.81	-	6.29	7.99	-	-	4.67	-	-	-	<0.0862	-	-	<0.256	6.1	<0.769	<0.256	<0.769	18.6	35.1	-	-	-	-	-	-	-
	18.1-2	18.1-2-1	10/22/2015	1.0	5	5	9.6	19	<various	-	<0.725	-	<0.725	-	-	146	-	-	<0.242	1.12	-	-	7.66	-	4.46	12.2	-	-	25.4	-	-	-	0.108	-	-	0.361	8.56	0.87	<0.242	<0.725	17.2	60.7	-	-	-	-	-	-	-
		18.1-2-2.0	10/22/2015	2.0	25	25	96	130	<various	-	<0.739	-	0.817	-	-	134	-	-	<0.246	1.44	-	-	11.5	-	5.8	95	-	-	**293**	**35.1**	-	3.59	0.18	-	-	0.356	47.9	<0.739	<0.246	<0.739	19.2	288	-	-	-	-	-	-	-
	18.1-3	18.1-3-1	10/22/2015	1.0	5	5	5	5	<various	-	<0.765	-	<0.765	-	-	72.6	-	-	0.286	1.39	-	-	9.72	-	8.66	12	-	-	3.47	-	-	-	0.103	-	-	0.341	21.6	<0.765	<0.255	<0.765	21.2	39.7	-	-	-	-	-	-	-
		18.1-3-3.5	10/22/2015	3.5	9.8	9.8	94	140	<various	-	<0.758	-	1.69	-	-	202	-	-	0.277	**2.81**	-	-	14.5	-	7.42	64.4	-	-	**554**	**18.4**	-	<0.100	0.862	-	-	0.256	19.3	<0.758	0.297	<0.758	26.6	545	-	-	-	-	-	-	-
	18.1-4	18.1-4-1	10/22/2015	1.0	5	5	36	59	<various	-	<0.725	-	8.51	-	-	443	-	-	<0.242	**3.99**	-	-	27.7	-	10.1	**312**	**38.7**	-	**1010**	**102**	-	4.06	1.24	-	-	<0.242	39.6	<0.725	0.258	<0.725	41.5	1400	-	-	-	-	-	-	-
		18.1-4-3.5	12/9/2015	3.5	5	5	5	5	<various	-	<0.750	-	3.59	-	-	72.9	-	-	<0.250	0.785	-	-	7.89	-	6.8	13.4	-	-	17.2	-	-	-	<0.0794	-	-	<0.250	7.04	0.961	<0.250	<0.750	22.4	68.6	-	-	-	-	-	-	-
	18.1-4A	18.1-4A-1	12/9/2015	1.0	5	5	77	170	<various	-	**452**	-	9.97	-	-	486	-	-	0.269	**5.44**	-	-	21.7	-	7.94	**531**	-	-	**13900**	-	-	**8.39**	0.468	-	-	<0.240	21.7	1.16	12.7	<0.721	30.6	2140	-	-	-	-	-	-	-
		18.1-4A-3.5	12/9/2015	3.5	5	5	100	220	<various	-	<0.739	-	4.58	-	-	99.3	-	-	<0.246	0.906	-	-	9.87	-	8.52	17.9	-	-	29.5	-	-	-	<0.0833	-	-	<0.246	9.27	2.08	<0.246	<0.739	27.1	68.8	-	-	-	-	-	-	-
	18.1-4B	18.1-4B-1	12/9/2015	1.0	5	5	8.4	20	<various	-	5.11	-	**14**	-	-	444	-	-	0.28	**2.74**	-	-	24.8	-	9.07	**475**	-	-	**1690**	-	-	**21.3**	0.341	-	-	<0.250	18.4	1.2	0.71	<0.750	30.9	1500	-	-	-	-	-	-	-
		18.1-4B-3.5	12/9/2015	3.5	5	5	5	5	<various	-	<0.750	-	2.99	-	-	64.8	-	-	<0.250	0.679	-	-	7.05	-	5.98	6.01	-	-	2.85	-	-	-	<0.0794	-	-	<0.250	5.87	1.68	<0.250	<0.750	22.2	36.6	-	-	-	-	-	-	-
	18.1-4C	18.1-4C-1	12/9/2015	1.0	5	5	21	47	<various	-	9.45	-	**12.6**	-	-	727	-	-	0.283	**3.16**	-	-	35.2	-	8.61	**552**	-	-	**1930**	-	-	4	0.439	-	-	<0.246	18	1.66	0.547	<0.739	26.9	1990	-	-	-	-	-	-	-
		18.1-4C-3.5	12/9/2015	3.5	5	5	5	5	<various	-	<0.750	-	3.55	-	-	70.9	-	-	<0.250	0.764	-	-	7.34	-	6.52	6.66	-	-	8.8	-	-	-	<0.0794	-	-	<0.250	6.65	**10.3**	<0.250	<0.750	22.2	56.3	-	-	-	-	-	-	-
	18.1-4D	18.1-4D-1	12/9/2015	1.0	5	5	52	91	<various	-	<0.725	-	10.7	-	-	474	-	-	0.315	**2.89**	-	-	30.6	-	8.72	**308**	-	-	**1170**	-	-	**5.3**	0.456	-	-	<0.242	25.2	1.4	0.434	<0.725	30.4	1550	-	-	-	-	-	-	-
		18.1-4D-3.5	12/9/2015	3.5	5	5	150	250	<various	-	3.49	-	10.6	-	-	463	-	-	0.296	**3.15**	-	-	27.9	-	8.73	**535**	-	-	**2560**	-	-	**6.34**	0.768	-	-	0.311	38.8	0.847	0.639	<0.750	37.7	1820	-	-	-	-	-	-	-
	18.1-5	18.1-5-1	12/9/2015	1.0	5	5	39	88	<various	-	9.35	-	7.35	-	-	451	-	-	0.408	**4.95**	-	-	26.1	-	11.6	**452**	-	-	**2050**	-	-	**6.8**	0.374	-	-	1.02	37.4	<0.750	0.622	<0.750	34.7	1310	-	-	-	-	-	-	-
		18.1-5-3.5	12/9/2015	3.5	5	5	369	1000	<various	-	7.5	-	2.32	-	-	208	-	-	0.277	**2.31**	-	-	12.3	-	7.09	232	-	-	**1020**	-	-	4.9	0.254	-	-	0.378	16.8	<0.750	0.472	<0.750	24.9	628	-	-	-	-	-	-	-
	18.1-6	18.1-6-1	12/9/2015	1.0	5	5	5.7	19	<various	-	2.68	-	0.798	-	-	153	-	-	<0.250	1.45	-	-	8.5	-	5.12	86.4	-	-	**334**	**65.8**	-	3.08	0.12	-	-	<0.250	7.49	<0.750	<0.250	<0.750	18.1	423	-	-	-	-	-	-	-
		18.1-6-3.5	12/9/2015	3.5	5	5	51	140	<various	-	22.8	-	2.45	-	-	196	-	-	0.261	**2.49**	-	-	12.4	-	7.74	**311**	-	-	**1510**	-	-	**205**	0.24	-	-	<0.250	11.7	<0.750	0.397	<0.750	26.6	597	-	-	-	-	-	-	-
	18.1-7	18.1-7-1	12/9/2015	1.0	5	5	63	150	<various	-	4.3	-	5.03	-	-	217	-	-	0.376	**2.7**	-	-	15	-	8.95	110	-	-	**505**	**56.6**	-	3.77	0.298	-	-	0.49	17.2	<0.750	0.335	<0.750	31.7	823	-	-	-	-	-	-	-
		18.1-7-3.5	12/9/2015	3.5	5	5	149	510	<various	-	1.88	-	1.46	-	-	121	-	-	0.264	1.67	-	-	10.5	-	7.45	53.1	-	-	**122**	**15.3**	-	**5.79**	0.115	-	-	<0.250	10.9	<0.750	<0.250	<0.750	27.5	178	-	-	-	-	-	-	-
	18.2-1	18.2-1-1	04/20/2016	1.0	5	5	5.6	11	11,000 (TCE)	-	<0.765	-	**15.6**	-	-	163	-	-	0.338	**14.2**	0.104	-	45.2	-	13	132	-	-	**468**	**9.6**	-	0.243	0.125	-	-	<0.255	22.8	<0.765	<0.255	<0.765	34.4	**4910**	53	-	-	-	-	-	-
		18.2-1-3.5	04/20/2016	3.5	5	5	5	5	<various	-	<0.781	-	<0.781	-	-	45.6	-	-	<0.260	<0.521	-	-	4.23	-	3.93	4.6	-	-	1.93	-	-	-	<0.0833	-	-	<0.260	3.69	<0.781	<0.260	<0.781	13.1	21.6	-	-	-	-	-	-	-
	18.2-2	18.2-2-1	04/20/2016	1.0	5	5	34	39	<various	-	3.44	-	2.25	-	-	112	-	-	0.313	0.519	-	-	12.2	-	9.72	43.1	-	-	**86.8**	**12**	-	-	0.168	-	-	<0.255	10.4	<0.765	<0.255	<0.765	32	17	-	-	-	-	-	-	-
		18.2-2-3.5	04/20/2016	3.5	5	5	160	300	67 (TCE)	-	**93.1**	-	**17.1**	-	-	**1450**	-	-	0.291	**8.07**	-	-	44.7	-	9.36	**2770**	23.6	-	**16100**	-	-	**126**	0.972	-	-	<0.254	32.7	<0.761	2.72	<0.761	28.5	**8730**	-	<0.100	-	-	-	-	-
	18.2-3	18.2-3-1	04/20/2016	1.0	5	5	22	50	8.0 (TCE)	-	2.42	-	2.05	-	-	152	-	-	0.344	0.889	-	-	13.8	-	8.58	107	-	-	**433**	**54.5**	-	0.958	0.284	-	-	<0.262	10.7	<0.785	<0.262	<0.785	30.9	299	-	-	-	-	-	-	-
		18.2-3-3.5	04/20/2016	3.5	5	5	47	68	53 (TCE)	-	5.11	-	4.75	-	-	207	-	-	0.28	**2.04**	-	-	13.1	-	7.46	**828**	-	-	**1310**	-	-	**12.2**	0.829	-	-	0.258	14	<0.739	0.829	<0.739	26.5	1260	-	-	-	-	-	-	-
	A-13-08	A08@5'	08/27/2013	5.0	**300**	5	ND	300	ND	-	ND	-	2.1	-	-	91	-	-	ND	ND	-	-	17	-	4.2	15	-	-	26	-	-	-	0.062	-	-	ND	7.5	ND	ND	ND	18	47	-	-	-	-	-	-	-
		A08@40'	08/27/2013	40.0	ND	ND	ND	ND	ND	-	ND	-	0.56	-	-	24	-	-	ND	ND	-	-	ND	-	ND	4.5	-	-	ND	-	-	-	0.046	-	-	ND	ND	ND	ND	ND	ND	13	-	-	-	-	-	-	-
		A08@55'	08/27/2013	55.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A08@65'	08/27/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	14	-	-	ND	ND	-	-	5.6	-	ND	ND	-	-	ND	-	-	-	ND	-	-	ND	3.3	ND	ND	ND	ND	7.6	-	-	-	-	-	-	-
	R-13-09	R09@10'	08/27/2013	10.0	ND	ND	ND	ND	ND	-	ND	-	1.1	-	-	28	-	-	ND	ND	-	-	5.1	-	ND	5.2	-	-	ND	-	-	-	0.06	-	-	ND	3.3	ND	ND	ND	13	16	-	-	-	-	-	-	-
		R09@50'	08/27/2013	50.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R09@60'	08/27/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	A-13-10	R10@5'	08/29/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	52	-	-	ND	ND	-	-	5.8	-	4.2	5.6	-	-	ND	-	-	-	0.07	-	-	ND	4.2	ND	ND	ND	20	27	-	-	-	-	-	-	-
		R10@30'	08/29/2013	30.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R10@55'	08/29/2013	55.0	ND	ND	ND	ND	ND	-	ND	-	0.96	-	-	46	-	-	ND	ND	-	-	9	-	4.4	12	-	-	ND	-	-	-	0.024	-	-	ND	7.6	ND	ND	ND	17	31	-	-	-	-	-	-	-
	A-13-12	R12@5'	09/3/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	39	-	-	ND	ND	-	-	7.9	-	3.4	34	-	-	**480**	**25**	-	**7.5**	0.12	-	-	ND	4.7	ND	ND	ND	19	42	-	-	-	-	-	-	-
		R12@10'	09/3/2013	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@15'	09/3/2013	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@20'	09/3/2013	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@30'	09/3/2013	30.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@60'	09/3/2013	60.0	ND	ND	ND	ND	ND	-	ND	-	3.4	-	-	110	-	-	ND	**2.4**	-	-	30	-	11	24	-	-	5.4	-	-	-	0.054	-	-	ND	19	ND	ND	ND	54	69	-	-	-	-	-	-	-
7	7-1	7-1-0.5	05/16/2017	0.5	ND	62	-	-	ND	ND	ND	-	2.7	-	-	110	-	-	ND	ND	-	-	14	-	6.8	**4,500**	12	-	45	-	-	-	0.13	-	-	ND	12	ND	ND	ND	30	100	-	-	-	-	-	-	-
		7-1-1.0	05/16/2017	1.0	ND	120	-	-	ND	ND	ND	-	1.2	-	-	120	-	-	ND	ND	-	-	8.8	-	4.8	**700**	**140**	-	**69**	**6.4**	-	0.47	0.22	-	-	ND	13	ND	ND	ND	24	270	-	-	-	ND	3.4 (4,4'-DDD [2C]) 5.9 (4,4'-DDE [2C]) 6.1 (4,4'-DDT [2C]) 2.5 (alpha-BHC [2C])	-	ND
	7-2	7-2-0.5	05/15/2017	0.5	ND	ND	-	-	ND	ND	ND	-	ND	-	-	93	-	-	ND	ND	-	-	6.1	-	4.3	8.3	-	-	27	-	-	-	0.18	-	-	ND	4.3	ND	ND	ND	19	57	-	-	-	ND	ND	-	ND
		7-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	35	-	-	ND	ND	-	-	4.5	-	3.9	3.1	-	-	1.1	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	15	17	-	-	-	-	-	-	-
		7-2-3.0	05/15/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	23	-	-	ND	ND	-	-	2.9	-	2.5	2.1	-	-	ND	-	-	-	0.19	-	-	ND	2.1	ND	ND	ND	11	13	-	-	-	-	-	-	-
		7-2-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	24	-	-	ND	ND	-	-	2.7	-	2.2	ND	-	-	ND	-	-	-	ND	-	-	ND	1.9	ND	ND	ND	10	11	-	-	-	-	-	-	-
	7-3	7-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.5	-	-	110	-	-	ND	ND	-	-	13	-	7.8	39	-	-	**51**	4.5	-	-	0.17	-	-	ND	11	ND	ND	ND	28	93	-	-	-	-	-	-	-
		7-3-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	1.1	-	-	77	-	-	ND	ND	-	-	8.3	-	6.1	11	-	-	33	-	-	-	0.11	-	-	ND	5.9	ND	ND	ND	26	44	-	-	-	ND	ND	-	ND
		7-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	61	-	-	ND	ND	-	-	7.1	-	5.3	6.8	-	-	7.0	-	-	-	ND	-	-	ND	4.8	ND	ND	ND	23	32	-	-	-	-	-	-	-
		7-3-5.0	05/15/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	34	-	-	ND	ND	-	-	4.6	-	3.3	3.1	-	-	ND	-	-	-	ND	-	-	ND	2.9	ND	ND	ND	18	15	-	-	-	-	-	-	-
	7-4	7-4-0.5	05/15/2017	0.5	ND	26	-	-	ND	ND	ND	-	1.1	-	-	130	-	-	ND	ND	-	-	12	-	8.2	36	-	-	**70**	**5.5**	-	ND	0.11	-	-	ND	9.3	1.2	ND	ND	32	150	-	-	-	ND	ND	-	ND
		7-4-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	100	-	-	ND	ND	-	-	9.8	-	6.2	44	-	-	43	-	-	-	0.12	-	-	ND	9.5	1.1	ND	ND	26	130	-	-	-	-	-	-	-
		7-4-3.0	05/15/2017	3.0	ND	**6,300**	-	-	ND	ND	ND	-	ND	-	-	92	-	-	ND	ND	-	-	11	-	7.6	13	-	-	31	-	-	-	0.64	-	-	ND	8.4	ND	ND	ND	29	80	-	-	-	-	-	-	-
		7-4-5.0	05/15/2017	5.0	-	-	-	-	-		ND	-	2.3	-	-	150	-	-	ND	ND	-	-	13	-	4.6	35	-	-	12	-	-	-	ND	-	-	ND	22	ND	ND	ND	23	890	-	-	-	-	-	-	-
	7-5	7-5-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	95	-	-	ND	ND	-	-	12	-	8.0	9.7	-	-	4.5	-	-	-	ND	-	-	ND	8.3	ND	ND	ND	32	39	-	-	-	-	-	-	-
		7-5-1.0	05/16/2017	1.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	95	-	-	ND	ND	-	-	12	-	8.2	10	-	-	3.0	-	-	-	ND	-	-	ND	8.6	1.0	ND	ND	34	38	-	-	-	ND	ND	-	ND
		7-5-3.0	05/16/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	120	-	-	ND	ND	-	-	14	-	9.9	18	-	-	3.5	-	-	-	ND	-	-	ND	12	1.1	ND	ND	38	46	-	-	-	-	-	-	-
		7-5-5.0	05/16/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	31	-	-	ND	ND	-	-	6.7	-	3.6	2.7	-	-	1.0	-	-	-	ND	-	-	ND	3.0	ND	ND	ND	28	16	-	-	-	-	-	-	-
	7-6	7-6-0.5	05/16/2017	0.5	ND	200	-	-	ND	ND	ND	-	1.2	-	-	91	-	-	ND	ND	-	-	8.4	-	5.2	28	-	-	31	-	-	-	0.13	-	-	ND	7.3	ND	ND	ND	23	77	-	-	-	ND	ND	-	ND
		7-6-1.0	05/16/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	93	-	-	ND	ND	-	-	8.7	-	5.7	28	-	-	22	-	-	-	0.16	-	-	ND	6.7	ND	ND	ND	24	60	-	-	-	-	-	-	-
		7-6-3.0	05/16/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	78	-	-	ND	ND	-	-	8.2	-	5.2	12	-	-	13	-	-	-	ND	-	-	ND	6.1	ND	ND	ND	23	50	-	-	-	-	-	-	-
		7-6-5.0	05/16/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	40	-	-	ND	ND	-	-	5.0	-	3.5	4.6	-	-	2.7	-	-	-	ND	-	-	ND	3.4	ND	ND	ND	16	19	-	-	-	-	-	-	-
	7-7	7-7-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	110	-	-	ND	ND	-	-	14	-	9.3	13	-	-	3.7	-	-	-	ND	-	-	ND	10	ND	ND	ND	35	41	-	-	-	-	-	-	-
		7-7-1.0	05/16/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	130	-	-	ND	ND	-	-	12	-	11	9.6	-	-	2.3	-	-	-	ND	-	-	ND	9.4	ND	ND	ND	37	47	-	-	-	ND	ND	-	ND
		7-7-3.0	05/16/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	26	-	-	ND	ND	-	-	5.0	-	2.9	2.2	-	-	ND	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	22	13	-	-	-	-	-	-	-
		7-7-5.0	05/16/2017	5.0	ND	470	-	-	ND	ND	ND	-	ND	-	-	17	-	-	ND	ND	-	-	3.2	-	2.1	ND	-	-	ND	-	-	-	ND	-	-	ND	1.8	ND	ND	ND	14	12	-	-	-	-	-	-	-
	L-2	L-2 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.8	-	-	97	-	-	ND	ND	-	-	8.7	-	4.7	11	-	-	6.4	-	-	-	ND	-	-	ND	6.5	ND	ND	ND	23	37	-	-	-	-	-	-	-
		L-2 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-3	L-3 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.6	-	-	68	-	-	ND	ND	-	-	6.4	-	3.9	21	-	-	22	-	-	-	0.1	-	-	ND	6.1	ND	ND	ND	18	81	-	-	-	-	-	-	-
		L-3 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-3 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-4	L-4 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	3.6	-	-	250	-	-	ND	1.5	-	-	11	-	5.3	84	-	-	**98**	**6**	-	-	0.27	-	-	ND	12	ND	ND	ND	25	290	-	-	-	-	-	-	-
		L-4 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	1.5	-	-	86	-	-	ND	ND	-	-	9	-	5.7	9.6	-	-	2	-	-	-	ND	-	-	ND	6.9	ND	ND	ND	27	38	-	-	-	-	-	-	-
		L-4 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-2	L-2 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
		L-2 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	1	-	-	33	-	-	ND	ND	-	-	4.1	-	2.4	3.7	-	-	1.2	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	12	16	-	-	-	-	-	-	-
		L-2 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1.3	-	-	37	-	-	ND	ND	-	-	5.2	-	2.9	4.4	-	-	1.4	-	-	-	ND	-	-	ND	3.7	ND	ND	ND	17	20	-	-	-	-	-	-	-

Table 2. Summary of Laboratory Test Results - Soil Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																																pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
8	L-3	L-3 @ 1'	02/26/2016	1.0	ND	18	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	2.9 (4,4' - DDT [2C])	-	-
		L-3 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	1.6	-	-	88	-	-	ND	ND	-	-	9.8	-	6.3	9.5	-	-	2.3	-	-	-	ND	-	-	ND	7.2	ND	ND	ND	30	41	-	-	-	-	-	-	-
		L-3 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1.7	-	-	89	-	-	ND	ND	-	-	10	-	6.6	9.8	-	-	2.4	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	31	41	-	-	-	-	-	-	-
	L-4	L-4 @ 1'	02/26/2016	1.0	ND	20	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	2.1 (4,4' - DDT [2C])	-	-
		L-4 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	2.2	-	-	130	-	-	ND	ND	-	-	12	-	6.7	26	-	-	14	-	-	-	ND	-	-	ND	9.9	ND	ND	ND	31	96	-	-	-	-	-	-	-
		L-4 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	2.6	-	-	130	-	-	ND	ND	-	-	12	-	5.3	37	-	-	**67**	-	-	-	0.17	-	-	ND	11	ND	ND	ND	24	150	-	-	-	-	-	-	-
	20-1	20-1-1	04/20/2016	1.0	<5	<5	25	42	<various	-	<0.789	-	2.7	-	-	172	-	-	<0.263	1.33	-	-	24.8	-	6.72	73.9	-	-	**240**	**13.4**	-	0.5	1.22	-	-	1.02	9.96	<0.789	0.401	<.789	25.8	170	-	-	-	-	-	-	-
	A-13-14	A14@10'	09/5/2013	10.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	46	-	-	ND	1.2	-	-	9.1	-	4.4	6.8	-	-	ND	-	-	-	0.036	-	-	ND	4.8	ND	ND	ND	33	26	-	-	-	-	-	-	-
		A14@20'	09/5/2013	20.0	6	16	2.4	25	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A14@45'	09/5/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A14@60'	09/5/2013	60.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	20	-	-	ND	ND	-	-	ND	-	ND	ND	-	-	ND	-	-	-	0.1	-	-	ND	3.5	ND	ND	ND	ND	13	-	-	-	-	-	-	-
	A-13-15	R15@5'	08/23/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	1.4	-	-	50	-	-	ND	ND	-	-	9.4	-	3.2	34	-	-	18	-	-	-	0.074	-	-	ND	4.7	ND	ND	ND	17	58	-	-	-	-	-	-	-
		R15@50'	08/23/2013	50.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R15@60'	08/23/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	8-1	8-1-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	**250**	**14**	-	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-1-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	**130**	**6.0**	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-1-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-1-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8-2	8-2-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-2-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-2-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8-3	8-3-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	2.4	-	-	110	-	-	ND	ND	-	-	12	-	6.9	140	-	-	49	-	-	-	ND	-	-	ND	9.6	ND	ND	ND	28	120	-	-	-	-	-	-	-
		8-3-1.0	05/16/2017	1.0	ND	ND	-	-	ND	ND	ND	-	1.5	-	-	70	-	-	ND	ND	-	-	7.3	-	4.9	34	-	-	35	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	21	65	-	-	-	ND	ND	-	ND
		8-3-3.0	05/16/2017	3.0	-	-	-	-	-	-	ND	-	2.6	-	-	110	-	-	ND	1.70	ND	ND	11	-	6.0	41	-	-	**65**	**11**	-	ND	0.11	-	-	ND	12	1.2	ND	ND	23	210	-	-	-	-	-	-	-
		8-3-5.0	05/16/2017	5.0	ND	ND	-	-	ND	ND	ND	-	2.3	-	-	68	-	-	ND	ND	-	-	22	ND	12	23	-	-	5.9	-	-	-	0.14	-	-	ND	20	ND	ND	ND	44	52	-	-	-	-	-	-	-
	L-1	L-1 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	8.9	-	4.3	-	-	530	-	-	ND	ND	-	-	15	-	7.4	85	-	-	**310**	**41**	-	-	ND	-	-	ND	13	ND	ND	ND	32	870	-	-	-	-	-	-	-
		L-1 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	2.9	-	-	120	-	-	ND	ND	-	-	14	-	7.8	19	-	-	4.6	-	-	-	0.2	-	-	ND	9.6	ND	ND	ND	29	50	-	-	-	-	-	-	-
		L-1 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-1	L-1 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-	-	-
		L-1 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	2.3	-	-	140	-	-	ND	ND	-	-	12	-	6.8	20	-	-	20	-	-	-	ND	-	-	ND	9.6	ND	ND	ND	29	99	-	-	-	-	-	-	-
		L-1 @ 3'	02/26/2016	3.0	ND	ND	-	-	ND	ND	ND	-	2.6	-	-	160	-	-	ND	ND	-	-	12	-	6.7	20	-	-	18	-	-	-	0.11	-	-	ND	10	ND	ND	ND	28	87	-	-	-	ND	ND	-	-
9	9-1	9-1-0.5	05/17/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**740**	**34**	ND	0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-
		9-1-1.0	05/17/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**94**	3.2	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-1-3.0	05/17/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-1-5.0	05/17/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9-2	9-2-0.5	05/17/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**78**	**5.3**	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-2-1.0	05/17/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**630**	**50**	ND	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	-	-	-
	9-3	9-3-0.5	05/17/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**52**	1.0	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-3-1.0	05/17/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-3-3.0	05/17/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-3-5.0	05/17/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	A-13-17	A17@5'	11/16/2013	5.0	1.2	ND	ND	ND	ND	-	ND	-	2	-	-	84	-	-	ND	1.4	-	-	7.1	-	3.6	7.4	-	-	ND	-	-	-	0.03	-	-	ND	5.2	ND	ND	ND	23	27	-	-	-	-	-	-	-
		A17@10'	11/16/2013	10.0	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@15'	11/16/2013	15.0	ND	ND	ND	ND	ND	-	ND	-	8.3	-	-	78	-	-	ND	**2.4**	-	-	21	-	14	25	-	-	6.3	-	-	-	0.074	-	-	ND	21	ND	ND	ND	41	73	-	-	-	-	-	-	-
		A17@25'	11/16/2013	25.0	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@40'	11/16/2013	40.0	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@60'	11/16/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trigger Level for Performing State Leachate Analysis (10×STLC)					NE	NE	NE	NE	2,040 (TCE)	varies	150	15 (STLC)	50	5 (STLC)	-	1,000	100 (STLC)	-	8	10	1 (STLC)	-	50	50	800	250	25 (STLC)	-	50	5 (STLC)	1.5 (STLC)	-	2	0.2 (STLC)	-	3,500	200	10	50	70	240	2,500	250 (STLC)	-	-	-	1,000 (DDT/DDE/DDD)	varies	varies
Trigger Level for Performing State and Federal Leachate Analysis (20×TCLP)					NE	NE	NE	NE	10 (TCE)	varies	NE	-	100	-	5 (TCLP)	2,000	-	100 (TCLP)	NE	20	-	1 (TCLP)	100	-	NE	NE	-	-	100	-	-	5 (TCLP)	4	-	0.2 (TCLP)	NE	NE	20	100	NE	NE	NE	-	-	-	-	varies	varies	varies
State Hazardous Disposal Criteria (TTLC)					NE	NE	NE	NE	2,040 (TCE)	varies	500	-	500	-	-	10,000	-	-	75	100	-	-	2,500	500	8,000	2,500	-	-	1,000	-	-	-	20	-	-	3,500	2,000	100	500	700	2,400	5,000	-	-	-	1,000 (DDT/DDE/DDD)	varies	varies
Screening Level for Keeping Soil on Site (OEHHA [a,c])					100	1,000	1,000	1,000	-	varies	30	-	12 [b,c]	-	-	5,200	-	-	16	1.7	-	-	100,000	17 [c]	660	3,000	-	-	80	-	-	-	18	-	-	380	1,600	380	380	5	530	23,000	-	-	-	300	2,300 (DDD) 1,600 (DDE) 1,600 (DDT)	varies	varies

Notes:

bold - Value detected above a trigger/screening value

[a] Office of Environmental Health Hazard Assessment (OEHHA) Residential Scenario's Soil-Screening Numbers (mg/kg soil) for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion and Dermal Absorption

[b] California EPA/DTSC background levels of Arsenic in Southern California for near surface soils

[c] Screening numbers for Chromium VI are used here. The screening value for Chromium III is 100,000 mg/kg.

µg/kg - microgram per kilogram

mg/kg - milligram per kilogram

mg/L - milligram per liter

ND - Not Detected (below Reporting Limit)

NE - Not Established

HUSHMAND ASSOCIATES, INC.
Environmental & Engineering Consultants

Table 3. Summary of Laboratory Test Results - Soil Gas and Ambient Air Samples

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	TPH GRO µg/m³ (TO-3)	VOCs, µg/m³ (TO-15)																
						Benzene	Carbon Tetrachloride	1,2-Dichloroethane	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Ethylbenzene	Mercury (elemental)	Methyl tert-Butyl Ether	Naphthalene	Tetrachloroethylene	Tetraethyl Lead	Toluene	1,1,1-Trichloroethane	Trichloroethylene	Vinyl Chloride	m,p-Xylene	o-Xylene	Other VOCs
2A, 2B, 2C	2A-1	2A-1-5	05/16/2017	5.0	-	6.4	ND	ND	ND	ND	ND	-	ND	ND	**830**	-	28	85	ND	ND	10	ND	-
		2A-1-10	05/16/2017	10.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**460**	-	8.5	53	ND	ND	ND	ND	-
		2A-1-15	05/16/2017	15.0	-	5.6	ND	ND	ND	ND	ND	-	ND	ND	**360**	-	12	63	ND	ND	ND	20	-
	2A-2	2A-2-5	05/16/2017	5.0	-	5.7	ND	ND	ND	ND	**27**	-	ND	ND	**370**	-	16	230	ND	ND	61	39	-
		2A-2-5 Dup	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**380**	-	14	220	ND	ND	19	8.9	-
		2A-2-10	05/16/2017	10.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**280**	-	9.1	200	ND	ND	13	8.1	-
		2A-2-15	05/16/2017	15.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	130	-	9.8	110	ND	ND	ND	ND	-
	2A-3	2A-3-5	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	25	-	ND	20	ND	ND	ND	8.1	-
		2A-3-10	05/16/2017	10.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	28	-	ND	25	ND	ND	ND	ND	-
		2A-3-15	05/16/2017	15.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	29	-	9.8	24	ND	ND	13	ND	-
	2A-Am	2A-Am	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
	P33-VP-1	VP-1	08/5/2015	5.0	3700	0.86	ND	ND	ND	ND	2	-	ND	ND	20	-	30	30	40	ND	20	3	-
	P33-VP-2	VP-2	08/5/2015	5.0	1900	0.89	ND	ND	ND	ND	1	-	ND	ND	30	-	10	70	-	ND	10	2	-
	P33-VP-3	VP-3	08/5/2015	5.0	2100	0.89	ND	ND	ND	ND	2	-	ND	ND	30	-	20	90	-	ND	20	3	-
		VP-3 Dup	08/5/2015	5.0	3000	ND	ND	ND	ND	ND	2	-	ND	ND	40	-	10	160	420	ND	10	3	-
	P33-VP-4	VP-4	08/5/2015	5.0	2700	0.83	ND	ND	ND	ND	4	-	ND	2	4	-	80	ND	2	ND	30	4	-
	P33-VP-5	VP-5	08/5/2015	5.0	3700	0.83	ND	ND	ND	ND	3	-	ND	ND	20	-	40	80	80	ND	20	4	-
	P33-VP-6	VP-6	08/5/2015	5.0	1700	1	ND	ND	ND	ND	2	-	ND	ND	6	-	30	3	10	ND	10	2	-
	P33-VP-7	VP-7	08/5/2015	5.0	1900	0.89	ND	ND	ND	ND	3	-	ND	ND	40	-	20	40	ND	ND	20	4	-
	P33-VP-8	VP-8	08/5/2015	5.0	2200	1	ND	ND	ND	ND	3	-	ND	ND	20	-	10	20	ND	ND	20	4	-
	P33-VP-9	VP-9	08/5/2015	5.0	2000	0.89	ND	ND	ND	ND	3	-	ND	ND	40	-	40	9	2	ND	20	5	-
		VP-9 Dup	08/5/2015	5.0	2600	2	ND	ND	ND	ND	3	-	ND	ND	20	-	20	9	2	ND	20	4	-
	P33-VP-10	VP-10	08/5/2015	5.0	2600	ND	ND	ND	ND	ND	ND	-	ND	ND	2	-	2	ND	ND	ND	ND	ND	-
	P33-VP-11	VP-11	08/5/2015	5.0	4300	ND	ND	ND	ND	ND	2	-	ND	ND	20	-	10	7	ND	ND	20	3	-
	P33-VP-12	VP-12	08/5/2015	5.0	2900	ND	ND	ND	ND	ND	2	-	ND	ND	70	-	10	3	ND	ND	10	3	-
	P32-VP-1	VP-1	08/7/2015	5.0	2000	2	ND	ND	ND	ND	1	-	ND	ND	20	-	2	5	ND	3	10	2	-
	P32-VP-2	VP-2	08/7/2015	5.0	3100	6	ND	ND	ND	ND	1	-	ND	6	ND	-	10	ND	ND	ND	10	2	-
	P32-VP-3	VP-3	08/7/2015	5.0	4200	ND	ND	ND	ND	ND	ND	-	ND	ND	10	-	0.94	8	ND	ND	ND	ND	-
	P32-VP-4	VP-4	08/7/2015	5.0	12000	ND	ND	ND	ND	ND	10	-	ND	2	6	-	280	5	ND	ND	120	20	-
	P32-VP-5	VP-5	08/7/2015	5.0	7100	1	ND	ND	ND	ND	2	-	ND	ND	10	-	4	4	ND	1	10	2	-
	P32-VP-6	VP-6	08/7/2015	5.0	2400	2	ND	ND	ND	ND	2	-	ND	3	7	-	8	3	ND	ND	20	4	-
	P32-VP-7	VP-7	08/7/2015	5.0	2700	0.93	ND	ND	ND	ND	ND	-	ND	ND	9	-	2	6	ND	ND	7	1	-
		VP-7 Dup	08/7/2015	5.0	2100	1	ND	ND	ND	ND	3	-	ND	**40**	9	-	4	6	ND	1	30	6	-
	P32-VP-8	VP-8	08/7/2015	5.0	2200	ND	ND	ND	ND	ND	ND	-	ND	1	8	-	ND	7	ND	ND	ND	ND	-
	P32-VP-9	VP-9	08/7/2015	5.0	2400	4	ND	ND	ND	ND	5	-	ND	4	5	-	30	3	ND	0.87	70	20	-
	P32-VP-10	VP-10	08/7/2015	5.0	4200	ND	ND	ND	ND	ND	20	-	ND	2	2	-	210	ND	ND	0.69	150	30	-
	P32-VMW-1	VMW-1	11/23/2016	10.0	300	ND	ND	ND	ND	ND	ND	-	ND	ND	10	-	50	ND	ND	ND	20	ND	-
		VMW-1 Dup	11/23/2016	10.0	780	ND	ND	ND	ND	ND	ND	-	ND	ND	**490**	-	40	ND	ND	ND	ND	ND	-
	P32-VMW-2	VMW-2	11/23/2016	5.0	390	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	40	ND	ND	ND	ND	ND	-
	P32-VMW-3	VMW-3	11/23/2016	15.0	1500	**70**	ND	ND	ND	ND	8	-	ND	ND	50	-	90	ND	10	ND	40	5	-
	P32-VMW-4	VMW-4	11/23/2016	10.0	370	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	30	ND	ND	ND	ND	ND	-
	P32-VMW-1	VMW-1 10'	11/28/2016	10.0	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	10	-	60	5	ND	ND	ND	ND	-
	P32-VMW-2	VMW-2 5'	11/28/2016	5.0	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	9	-	60	ND	ND	ND	ND	ND	-
	P32-VMW-3	VMW-3 15'	11/28/2016	15.0	450	30	ND	ND	ND	ND	3	-	ND	ND	9	-	70	7	ND	ND	10	ND	-
		VMW-3 Dupl. 15'	11/28/2016	15.0	850	20	ND	ND	ND	ND	3	-	ND	ND	7	-	190	6	ND	ND	20	ND	-
	P32-VMW-4	VMW-4 10'	11/28/2016	10.0	360	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	90	ND	ND	ND	ND	ND	-
6	6-Am	6-Am	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
7	7-1	7-1-5	05/16/2017	5.0	-	9	ND	ND	ND	ND	ND	-	ND	ND	**430**	-	11	ND	ND	ND	ND	ND	-
	7-3	7-3-5	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**550**	-	ND	ND	38	ND	ND	ND	-
	7-4	7-4-5	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	23	ND	ND	ND	150	ND	-
		7-4-5 Dup	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	22	ND	ND	ND	140	ND	-
	7-Am	7-Am	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
	7-Am Dup	7-Am Dup	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-

Table 3. Summary of Laboratory Test Results - Soil Gas and Ambient Air Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	TPH GRO µg/m³ (TO-3)	VOCs, µg/m³ (TO-15)																
						Benzene	Carbon Tetrachloride	1,2-Dichloroethane	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Ethylbenzene	Mercury (elemental)	Methyl tert-Butyl Ether	Naphthalene	Tetrachloroethylene	Tetraethyl Lead	Toluene	1,1,1-Trichloroethane	Trichloroethylene	Vinyl Chloride	m,p-Xylene	o-Xylene	Other VOCs
7	P20-VP-1	VP-1	04/26/2016	5.0	120000	ND	ND	ND	ND	ND	ND	-	ND	ND	**310**	-	ND	ND	ND	ND	ND	-
	P20-VP-2	VP-2	04/26/2016	5.0	21000	ND	ND	ND	ND	ND	ND	-	ND	ND	**270**	-	ND	ND	ND	ND	ND	-
	P20-VP-3	VP-3	04/26/2016	5.0	27000	ND	ND	ND	ND	ND	ND	-	ND	ND	**390**	-	ND	ND	ND	ND	ND	-
	P20-VP-4	VP-4	04/26/2016	5.0	6500	ND	ND	ND	ND	ND	ND	-	ND	ND	**1000**	-	ND	ND	20	ND	ND	-
		VP-4 Dup	04/26/2016	5.0	2000	ND	ND	ND	ND	ND	ND	-	ND	ND	**480**	-	ND	ND	ND	ND	ND	-
	P20-VP-5	VP-5	04/26/2016	3.0	7600	ND	ND	ND	ND	ND	ND	-	ND	ND	**4700**	-	ND	ND	ND	ND	ND	-
	P20-VP-6	VP-6	04/26/2016	5.0	6400	ND	ND	ND	ND	ND	ND	-	ND	ND	**1400**	-	ND	ND	ND	ND	ND	-
	P20-VP-7	VP-7	04/26/2016	3.0	7500	ND	ND	ND	ND	ND	ND	-	ND	ND	**4300**	-	ND	ND	ND	ND	ND	-
	P20-VP-8	VP-8	04/26/2016	5.0	5800	ND	ND	ND	ND	ND	ND	-	ND	ND	**2600**	-	ND	ND	ND	ND	ND	-
	P20-VP-9	VP-9	04/26/2016	5.0	2800	ND	ND	ND	ND	ND	ND	-	ND	ND	120	-	20	ND	ND	ND	ND	-
		VP-9 Dup	04/26/2016	5.0	4300	ND	ND	ND	ND	ND	ND	-	ND	ND	**970**	-	ND	ND	ND	ND	ND	-
	P22-VP-1	VP-1	08/13/2015	5.0	6100	2	ND	ND	ND	ND	2	-	ND	2	70	-	7	ND	2	ND	10	2	-
	P22-VP-2	VP-2	08/13/2015	5.0	4900	2	ND	ND	ND	ND	3	-	ND	10	120	-	8	3	1	ND	20	5	-
	P22-VP-3	VP-3	08/13/2015	5.0	5600	ND	ND	ND	ND	ND	ND	-	ND	ND	80	-	3	ND	ND	ND	6	ND	-
	P22-VP-4	VP-4	08/13/2015	5.0	5200	3	ND	ND	ND	ND	3	-	ND	3	120	-	20	3	ND	ND	30	6	-
	P22-VP-5	VP-5	08/13/2015	5.0	7700	4	ND	ND	ND	ND	2	-	ND	5	6	-	10	30	ND	ND	20	3	-
	P22-VP-6	VP-6	08/13/2015	5.0	6500	ND	ND	ND	ND	ND	ND	-	ND	ND	**230**	-	3	5	ND	ND	5	ND	-
		VP-6 Dup	08/13/2015	5.0	5400	ND	ND	ND	ND	ND	ND	-	ND	ND	170	-	3	4	ND	ND	5	ND	-
	P22-VP-7	VP-7	08/13/2015	5.0	5100	ND	ND	ND	ND	ND	ND	-	ND	ND	180	-	3	3	ND	ND	6	ND	-
	P22-VP-8	VP-8	08/13/2015	5.0	6100	2	ND	ND	ND	ND	ND	-	ND	ND	160	-	4	5	ND	ND	6	1	-
	P22-VP-9	VP-9	08/13/2015	5.0	5800	ND	ND	ND	ND	ND	1	-	ND	3	**270**	-	3	4	ND	ND	10	3	-
	P22-VP-10	VP-10	08/13/2015	5.0	3600	4	ND	ND	ND	ND	2	-	ND	ND	2	-	10	ND	ND	ND	10	2	-
	P22-VP-11	VP-11	08/13/2015	5.0	9000	2	ND	ND	ND	ND	2	-	ND	ND	180	-	20	3	ND	ND	20	4	-
	P22-VP-12	VP-12	08/13/2015	5.0	6200	ND	ND	ND	ND	ND	1	-	ND	2	120	-	5	2	ND	ND	20	4	-
	P23-SV1	SV1	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV2	SV2	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV3	SV3	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV4	SV4	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV5	SV5	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
		SV5 Dup	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV6	SV6	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV7	SV7	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV8	SV8	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV9	SV9	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV10	SV10	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV11	SV11	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV12	SV12	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV13	SV13	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-Am	Ambient Air	11/27/2013	Ambient	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
8-3	8-3	8-3-5	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-3 Dup	05/16/2017	5.0	-	22	ND	ND	ND	ND	ND	-	ND	ND	**2000**	-	20	81	60	ND	27	11	-
Screening Level for Keeping Soil on Site (OEHHA [a])					-	36	25	50	16,000	32,000	420	45	4,000	32	180	0.21	140,000	990,000	530	13	320,000	320,000	-

Notes:

bold - Value detected above a trigger/screening value

[a] Office of Environmental Health Hazard Assessment (OEHHA) Residential Scenario's Soil-Gas-Screening Numbers for Nonvolatile Chemicals below Buildings Constructed without Engineered Fill below Sub-slab Gravel

µg/m³ - microgram per cubic meter

ND - Not Detected (below Reporting Limit)

NE - Not Established

Results of the baseline HHRA indicate health risk in area 2a, 2b and 2c are acceptable. See HHRA in appendix E.

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

Table 4 . Summary of Laboratory Test Results and Field Measurements - Methane Gas

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Methane [a] (ppmv)	Methane [b] (ppmv)	Barometric Pressure (inHg) [b]	Probe Pressure (inH_2O) [c]
2A-1	2A-1-5	05/16/2017	5.0	ND	-	-	-
	2A-1-10	05/16/2017	10.0	ND	-	-	-
	2A-1-15	05/16/2017	15.0	21	-	-	-
2A-2	2A-2-5	05/16/2017	5.0	ND	-	-	-
	2A-2-5 Dup	05/16/2017	5.0	30	-	-	-
	2A-2-10	05/16/2017	10.0	ND	-	-	-
	2A-2-15	05/16/2017	15.0	**260**	-	-	-
2A-3	2A-3-5	05/16/2017	5.0	ND	-	-	-
	2A-3-10	05/16/2017	10.0	ND	-	-	-
	2A-3-15	05/16/2017	15.0	ND	-	-	-
2A-Am	2A-Am	05/16/2017	Ambient	-	-	-	-
6-Am	6-Am	05/16/2017	Ambient	-	-	-	-
7-1	7-1-5	05/16/2017	5.0	ND	-	-	-
7-3	7-3-5	05/16/2017	5.0	ND	-	-	-
7-4	7-4-5	05/16/2017	5.0	ND	-	-	-
	7-4-5 Dup	05/16/2017	5.0	ND	-	-	-
7-Am	7-Am	05/16/2017	Ambient	-	-	-	-
7-Am Dup	7-Am Dup	05/16/2017	Ambient	-	-	-	-
8-3	8-3-5	05/16/2017	5.0	-	-	-	-
	8-3 Dup	05/16/2017	5.0	ND	-	-	-
P20-VP-1	P20-VP-1	08/13/2015	5.0	-	**130**	-	-
P20-VP-2	P20-VP-2	08/13/2015	5.0	-	**170**	-	-
P20-VP-3	P20-VP-3	08/13/2015	5.0	-	95	-	-
P20-VP-4	P20-VP-4	08/13/2015	5.0	-	**110**	-	-
P20-VP-5	P20-VP-5	08/13/2015	3.0	-	**170**	-	-
P20-VP-6	P20-VP-6	08/13/2015	5.0	-	**160**	-	-
P20-VP-7	P20-VP-7	08/13/2015	3.0	-	**140**	-	-
P20-VP-8	P20-VP-8	08/13/2015	5.0	-	**180**	-	-
P20-VP-9	P20-VP-9	08/13/2015	5.0	-	**150**	-	-
P22-VP-1	P22-VP-1	08/13/2015	5.0	-	**150**	-	-
P22-VP-2	P22-VP-2	08/13/2015	5.0	-	**160**	-	-
P22-VP-3	P22-VP-3	08/13/2015	5.0	-	**140**	-	-
P22-VP-4	P22-VP-4	08/13/2015	5.0	-	**130**	-	-
P22-VP-5	P22-VP-5	08/13/2015	5.0	-	**180**	-	-
P22-VP-6	P22-VP-6	08/13/2015	5.0	-	**150**	-	-
	P22-VP-6 Dup	08/13/2015	-	-	-	-	-
P22-VP-7	P22-VP-7	08/13/2015	5.0	-	**120**	-	-
P22-VP-8	P22-VP-8	08/13/2015	5.0	-	100	-	-
P22-VP-9	P22-VP-9	08/13/2015	5.0	-	**190**	-	-
P22-VP-10	P22-VP-10	08/13/2015	5.0	-	**110**	-	-
P22-VP-11	P22-VP-11	08/13/2015	5.0	-	**140**	-	-
P22-VP-12	P22-VP-12	08/13/2015	5.0	-	100	-	-
P32-VP-1	P32-VP-1	08/7/2015	5.0	-	0	-	-
P32-VP-2	P32-VP-2	08/7/2015	5.0	-	0	-	-
P32-VP-3	P32-VP-3	08/7/2015	5.0	-	0	-	-
P32-VP-4	P32-VP-4	08/7/2015	5.0	-	0	-	-
P32-VP-5	P32-VP-5	08/7/2015	5.0	-	0	-	-
P32-VP-6	P32-VP-6	08/7/2015	5.0	-	0	-	-
P32-VP-7	P32-VP-7	08/7/2015	5.0	-	0	-	-
	P32-VP-7 Dup	08/7/2015	5.0	-	-	-	-
P32-VP-8	P32-VP-8	08/7/2015	5.0	-	0	-	-
P32-VP-9	P32-VP-9	08/7/2015	5.0	-	0	-	-
P32-VP-10	P32-VP-10	08/7/2015	5.0	-	0	-	-
P33-VP-1	P33-VP-1	08/5/2015	5.0	-	0	-	-
P33-VP-2	P33-VP-2	08/5/2015	5.0	-	0	-	-
P33-VP-3	P33-VP-3	08/5/2015	5.0	-	0	-	-
	P33-VP-3 Dup	08/5/2015	-	-	-	-	-
P33-VP-4	P33-VP-4	08/5/2015	5.0	-	0	-	-
P33-VP-5	P33-VP-5	08/5/2015	5.0	-	0	-	-
P33-VP-6	P33-VP-6	08/5/2015	5.0	-	0	-	-
P33-VP-7	P33-VP-7	08/5/2015	5.0	-	0	-	-
P33-VP-8	P33-VP-8	08/5/2015	5.0	-	0	-	-
P33-VP-9	P33-VP-9	08/5/2015	5.0	-	0	-	-
	P33-VP-9 Dup	08/5/2015	-	-	-	-	-

Table 4 . Summary of Laboratory Test Results and Field Measurements - Methane Gas (Cont'd)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Methane [a] (ppmv)	Methane [b] (ppmv)	Barometric Pressure (inHg) [b]	Probe Pressure (inH_2O) [c]
P33-VP-10	P33-VP-10	08/5/2015	5.0	-	0	-	-
P33-VP-11	P33-VP-11	08/5/2015	5.0	-	0	-	-
P33-VP-12	P33-VP-12	08/5/2015	5.0	-	0	-	-
P32-VMW-1	P32-VMW-1	11/23/2016	5.0	-	0	29.89-0.15"	0
		11/23/2016	5.0	-	0	29.89-0.15"	0
		11/28/2016	5.0	-	0	29.69-0.15"	0
		11/28/2016	5.0	-	0	29.69-0.15"	0
P32-VMW-2	P32-VMW-2	11/23/2016	5.0	-	0	29.85-0.15"	0
		11/23/2016	5.0	-	0	29.85-0.15"	0
		11/28/2016	5.0	-	0	29.69-0.16"	0
		11/28/2016	5.0	-	0	29.69-0.16"	0
P32-VMW-3	P32-VMW-3	11/23/2016	5.0	-	0	29.85-0.15"	0
		11/23/2016	5.0	-	0	29.85-0.15"	0
		11/28/2016	5.0	-	0	29.69-0.16"	0
		11/28/2016	5.0	-	0	29.69-0.16"	0
P32-VMW-4	P32-VMW-4	11/23/2016	5.0	-	0	29.89-0.15"	0
		11/23/2016	5.0	-	0	29.89-0.15"	0
		11/28/2016	5.0	-	0	29.72-0.13"	0
		11/28/2016	5.0	-	0	29.72-0.13"	0
P23-SV1	P23-SV1	11/27/2013	-	-	0	-	-
P23-SV2	P23-SV2	11/27/2013	-	-	0	-	-
P23-SV3	P23-SV3	11/27/2013	-	-	0	-	-
P23-SV4	P23-SV4	11/25/2013	-	-	0	-	-
P23-SV5	P23-SV5	11/27/2013	-	-	0	-	-
	P23-SV5 Dup	11/27/2013	-	-	-	-	-
P23-SV6	P23-SV6	11/25/2013	-	-	0	-	-
P23-SV7	P23-SV7	11/25/2013	-	-	0	-	-
P23-SV8	P23-SV8	11/25/2013	-	-	0	-	-
P23-SV9	P23-SV9	11/25/2013	-	-	0	-	-
P23-SV10	P23-SV10	11/25/2013	-	-	0	-	-
P23-SV11	P23-SV11	11/25/2013	-	-	0	-	-
P23-SV12	P23-SV12	11/25/2013	-	-	0	-	-
P23-SV13	P23-SV13	11/25/2013	-	-	0	-	-
P23-Ambient	Ambient	11/25/2013	Ambient	-	-	-	-
Screening Level for Methane Gas Concentrations (City of Los Angeles Methane Ordinance) [d]				Note [d]	Note [d]		

Notes:

[a] Laboratory Test Results using ASTM D1946

[b] Field measurements were made using RKI Eagle Multi-Gas Meter & GEM 2000

[c] Measurements were made with Dwyer 475 pressure gage

[d] Design Methane Concentration 0-100 ppmv for Level I and 101-1000 ppmv for Level II Site Design based on City of Los Angeles Ordinance No. 175790 on Methane Mitigation Standards

ppmv - parts per million by volume

ND - Not Detected (below Reporting Limit)

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Table 5 . Summary of Laboratory Test Results – Soil Samples from ADL Borings

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	pH
9	9-1	9-1-0.5	05/17/2017	0.5	**740**	**34**	ND	0.42	6.8
		9-1-1.0	05/17/2017	1.0	**94**	3.2	ND	ND	-
		9-1-3.0	05/17/2017	3.0	7.1	-	-	-	-
		9-1-5.0	05/17/2017	5.0	2.0	-	-	-	-
	9-2	9-2-0.5	05/17/2017	0.5	**78**	**5.3**	ND	ND	-
		9-2-1.0	05/17/2017	1.0	**630**	**50**	ND	1.5	7.6
	9-3	9-3-0.5	05/17/2017	0.5	**52**	1.0	ND	ND	-
		9-3-1.0	05/17/2017	1.0	29	-	-	-	-
		9-3-3.0	05/17/2017	3.0	1.7	-	-	-	-
		9-3-5.0	05/17/2017	5.0	5.9	-	-	-	-
Trigger Level for Performing State Leachate Analysis (10×STLC)					50	5 (STLC)	1.5 (STLC)	-	-
Trigger Level for Performing State and Federal Leachate Analysis (20×TCLP)					100	-	-	5 (TCLP)	-
State Hazardous Disposal Criteria (TTLC)					1,000	-	-	-	-
Screening Level for Keeping Soil on Site (OEHHA [(a)])					80	-	-	-	-

Notes:

bold - Value detected above a trigger/screening value

[(a)] Office of Environmental Health Hazard Assessment (OEHHA) Residential Scenario's Soil-Screening Numbers (mg/kg soil) for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion and Dermal Absorption

mg/kg - milligram per kilogram

mg/L - milligram per liter

ND - Not Detected (below Reporting Limit)

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Table 6 . Summary of Statistical Analysis Results – Soil Samples from ADL Borings

Parameter	Total Lead (mg/kg)	STLC Lead (CA-WET) (mg/L)	STLC Lead (DI-WET) (mg/L)	TCLP Lead (mg/L)	pH
All Depths					
Number of Data Points	10	5	5	5	2
Minimum Value	1.7	1	ND	0.42	6.8
Maximum Detected Value	740	50	ND	1.5	7.6
Mean	164	18.7	N/A	0.96	7.2
Geo-Mean	30.66	7.798	N/A	0.794	7.189
Standard Deviation	277.7	22.06	N/A	0.764	0.566
80%ile	201.2	37.2	N/A	1.284	7.44
90%ile	641	43.6	N/A	1.392	7.52
95%ile	690.5	46.8	N/A	1.446	7.56
0.5 Foot Depth					
Number of Data Points	3	3	3	3	1
Minimum Value	52	1	ND	ND	6.8
Maximum Detected Value	740	34	ND	0.42	6.8
Mean	290	13.43	N/A	0.42	6.8
Geo-Mean	144.2	5.648	N/A	0.42	6.8
Standard Deviation	389.9	17.94	N/A	N/A	N/A
80%ile	475.2	22.52	N/A	0.42	6.8
90%ile	607.6	28.26	N/A	0.42	6.8
95%ile	673.8	31.13	N/A	0.42	6.8
1.0 Foot Depth					
Number of Data Points	3	2	2	2	1
Minimum Value	29	3.2	ND	ND	7.6
Maximum Detected Value	630	50	ND	1.5	7.6
Mean	251	26.6	N/A	1.5	7.6
Geo-Mean	119.8	12.65	N/A	1.5	7.6
Standard Deviation	329.8	33.09	N/A	N/A	N/A
80%ile	415.6	40.64	N/A	1.5	7.6
90%ile	522.8	45.32	N/A	1.5	7.6
95%ile	576.4	47.66	N/A	1.5	7.6
3.0 Foot Depth					
Number of Data Points	2	0	0	0	0
Minimum Value	1.7	N/A	N/A	N/A	N/A
Maximum Detected Value	7.1	N/A	N/A	N/A	N/A
Mean	4.4	N/A	N/A	N/A	N/A
Geo-Mean	3.474	N/A	N/A	N/A	N/A
Standard Deviation	3.818	N/A	N/A	N/A	N/A
80%ile	6.02	N/A	N/A	N/A	N/A
90%ile	6.56	N/A	N/A	N/A	N/A
95%ile	6.83	N/A	N/A	N/A	N/A
5.0 Foot Depth					
Number of Data Points	2	0	0	0	0
Minimum Value	2	N/A	N/A	N/A	N/A
Maximum Detected Value	5.9	N/A	N/A	N/A	N/A
Mean	3.95	N/A	N/A	N/A	N/A
Geo-Mean	3.435	N/A	N/A	N/A	N/A
Standard Deviation	2.758	N/A	N/A	N/A	N/A
80%ile	5.12	N/A	N/A	N/A	N/A
90%ile	5.51	N/A	N/A	N/A	N/A
95%ile	5.705	N/A	N/A	N/A	N/A

Notes:

N/A - Not Applicable

ND - Not Detected (below Reporting Limit)

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Table 9 . Rough Order of Magnitude Cost Estimate for Remediation - Sixth Street Viaduct PARC Improvements (Not for Budgeting Purposes)

PARC Area Designation	Estimated Area [1] (sq. ft.)	Estimated Perimeter of Excavation or Area [1] (ft.)	Type of Contamination	Conservative Estimate of Contaminated Depth (ft.)	Estimated Volume of Removal & Disposal (inplace cy)	Estimated Tons for Disposal [2]	Rough Estimated Cost for Removal & Disposal [3], [4]	Estimated Backfill Cost [5]	Total Removal & Backfilling Construction Cost	Estimated Perimeter Barrier/Liner Cost [6], [7]	Estimated SVE Installation Cost [8]	Estimated SVE Operation & Monitoring [9]	Methane Mitigation Cost [10]	Estimated Eng./Monitoring Cost [11], [12], [13]	Total ROM Cost	Notes
1A Paved Area Near Existing Building	6,150	-	Methane Zone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$49,200	$84,840	$134,040	Plans Require City Methane Dept. Approval, Methane Mitigation Installed After Removal of Non-RCRA HAZ Soil
1A West Portion	8,673	393	CAT 2a: Non-RCRA HAZ	3.5	1,124	1,518	$135,082	$25,858	$160,940	N/A	N/A	N/A	N/A	$24,141	$185,081	
1A Central Portion	17,062	523	CAT 2a: Non-RCRA HAZ	1.0	632	853	$75,926	$14,534	$90,460	N/A	N/A	N/A	N/A	$13,569	$104,029	
1A East Portion	39,407	873	CAT 2a: Non-RCRA HAZ	1.5	2,189	2,956	$263,042	$50,353	$313,395	N/A	N/A	N/A	N/A	$47,009	$360,404	
2A NE Corner	2,001	220	CAT 2a: Non-RCRA HAZ	6.0	445	600	$53,427	$10,227	$63,654	N/A	N/A	N/A	N/A	$9,548	$73,202	
5 Central Portion	10,940	439	CAT 2a: Non-RCRA HAZ	4.0	1,621	2,188	$194,732	$37,277	$232,009	N/A	N/A	N/A	N/A	$34,801	$266,810	
6 (around boring 6-2)	14,302	490	CAT 2a: Non-RCRA HAZ	0.75	397	536	$47,733	$9,137	$56,870	N/A	N/A	N/A	N/A	$8,531	$65,401	
6 (around borings 6-3)	11,883	438	CAT 1a: RCRA HAZ	4.0	1,760	2,377	$480,073	$40,490	$520,563	N/A	N/A	N/A	N/A	$78,085	$598,648	
6 (around borings 6-4 and 6-5)	11,752	545	CAT 2a: Non-RCRA HAZ	2.0	871	1,175	$104,593	$20,022	$124,615	N/A	N/A	N/A	N/A	$18,692	$143,307	
6 (around Parcel 18.1)	16,015	549	CAT 1a: RCRA HAZ	4.5	2,669	3,603	$727,882	$61,391	$789,273	N/A	N/A	N/A	N/A	$118,391	$907,663	Excludes1 ft. soil previously removed and disposed
6 (around Parcel 18.2)	11,035	421	CAT 1a: RCRA HAZ	3.5	1,430	1,931	$390,087	$32,901	$422,988	N/A	N/A	N/A	N/A	$63,448	$486,436	
7 North Portion	7,223	372	CAT 3: Soil Gas Only	15.0	N/A	N/A	N/A	N/A	N/A	$61,380	$135,135	$48,750	$37,560	$156,815	$439,640	Assumes 65% of Area Has Impervious Surface and Nearby Buildings
7 North Central	759	113	CAT 2b: Soil Gas and Non-RCRA HAZ	2.0	56	76	$6,755	$1,293	$8,048	N/A	$14,200	$48,750	$3,947	$100,239	$175,184	Assumes 65% of Area Has Impervious Surface and Nearby Buildings
7 Central Portion	20,801	592	CAT 2b: Soil Gas and Non-RCRA HAZ	2.0	1,541	2,080	$185,129	$35,439	$220,568	$97,680	$389,167	$48,750	$108,165	$247,088	$1,111,417.41	Assumes 65% of Area Has Impervious Surface and Nearby Buildings
7 East Portion	7,191	349	CAT 3: Soil Gas Only	15.0	N/A	N/A	N/A	N/A	N/A	$57,585	$134,537	$48,750	$37,393	$140,903	$419,168	Assumes 65% of Area Has Impervious Surface and Nearby Buildings
8 West Portion	11,272	484	CAT 2b: Soil Gas and Non-RCRA HAZ	4.0	1,670	2,254	$200,642	$38,408	$239,050	$79,845	$210,888	$48,750	N/A	$135,707	$714,240	
8 East Portion	5,927	374	CAT 3: Soil Gas Only	15.0	N/A	N/A	N/A	N/A	N/A	$61,710	$110,889	$48,750	N/A	$139,270	$360,618	
9	14,949	734	Aerially Deposited Lead	1.0	554	N/A	N/A	$12,734	N/A	N/A	N/A	N/A	N/A	$1,910	$14,644	
Remedial Action Plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$50,000	$50,000	
Rule 1166 Mitigation Plan & Permits	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$75,000	$75,000	
QA/QC and RACR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$150,000	$150,000	
Total Area	**217,342**													**Total**	**$6,834,935**	
														+25%	**$8,543,669**	
														-20%	**$5,467,948**	

Notes/Assumptions:

(1) Area and perimeter estimates from Figures 7a & 7b.
(2) Conversion from cubic yards to tons assumes all soil unit weight is 1.35 tons/inplace cubic yard.
(3) Removal and disposal (at California Class I landfill) cost assumed as $202/ton for RCRA HAZ based on and information from recent City of Los Angeles projects
(4) Non-RCRA HAZ removal and disposal (at California Class II landfill) cost assumed as $89/ton based on BOE unit rate provided. This may vary depending on disposal site and additional testing.
(5) Backfill volume assumed 15% shrinkage for compaction. Unit rate is assumed as $20/cy.
(6) Horizontal liner or vapor barrier cost per sf based on TRC White Paper March 2016, range for field constructed 60 mil liner $5-$10/sf, use $6/sf due to no building complexities. Assumed unit cost of $6/sf.
(7) Reference for Unit Cost: Design and Control of Slurry Wall Backfill Mixes for Groundwater Containment, Composite/Liner $7-$14/vsf, assume $11/vsf.
(8) SVE capital cost pro-rated from sample project in Florida with cost of $173,620 for 11,600 sf site. Assumed unit cost of $14.97/sf x 125% = $18.71/sf for inflation and CA higher rates.
(9) SVE O&M assumed for 12 months in all cases and a monthly rate of $3,250 based on Florida sample project increased by 125% for inflation and high CA rates to $4063/month.
(10) From TRC White Paper field constructed 60 mil liner at $6/sf plus $1/sf for venting and assume $2/sf, assumed total of $8/sf.
(11) Estimate for SVE Pilot Test is $20,000/test.
(12) Assuming monitoring costs to be 15% of total construction costs for Removal & Backfilling; 20% of total construction costs for Gas Intrusion and SVE
(13) Includes 30 yrs of O&M for methane mitigation system at $2500 per year.

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Table 10. Comparison of Unrestricted Land Use and Commercial/Industrial Screening Results - Soil Samples

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																																pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
1A & 1B	1A-1	1A-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	3.8	-	2.1	-	-	200	-	-	ND	1.9	ND	ND	17	2.9	5.6	230	-	-	860	51	-	3.6	0.91	-	-	ND	11	ND	ND	ND	23	240	-	-	-	-	-	-	-
		1A-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	99	-	-	ND	ND	-	-	9.7	-	5.1	46	-	-	230	9.9	-	ND	ND	-	-	ND	6.8	ND	ND	ND	20	130	-	-	-	-	-	-	-
		1A-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	3.3	-	1.3	-	-	97	-	-	ND	ND	-	-	19	ND	4.8	100	-	-	440	11	-	1.3	0.12	-	-	1.2	8.4	ND	ND	ND	19	170	-	-	-	-	-	-	-
		1A-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	33	-	-	ND	ND	-	-	4.4	-	3.5	4.5	-	-	1.1	-	-	-	ND	-	-	ND	2.8	ND	ND	ND	14	15	-	-	-	-	-	-	-
	1A-2	1A-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.3	-	-	310	-	-	ND	ND	-	-	15	-	6.3	50	-	-	310	26	-	ND	0.45	-	-	ND	11	ND	ND	ND	25	480	-	-	-	-	-	-	-
		1A-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	1.2	-	-	63	-	-	ND	ND	-	-	7.9	-	5.5	9.2	-	-	15	-	-	-	0.2	-	-	ND	5.8	ND	ND	ND	22	45	-	-	-	-	-	-	-
		1A-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	39	-	-	ND	ND	-	-	4.9	-	3.7	4.2	-	-	ND	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	17	16	-	-	-	-	-	-	-
		1A-2-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	1.7	-	-	120	-	-	ND	ND	-	-	13	-	9	18	-	-	3.2	-	-	-	0.17	-	-	ND	9.9	ND	ND	ND	26	45	-	-	-	-	-	-	-
	1A-3	1A-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.2	-	-	120	-	-	ND	ND	-	-	15	-	6.1	48	-	-	140	5.9	-	ND	0.18	-	-	ND	9.2	ND	ND	ND	23	130	-	-	-	-	-	-	-
		1A-3-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	130	-	-	ND	ND	-	-	11	-	6.5	26	-	-	130	7.1	-	ND	0.2	-	-	ND	10	ND	ND	ND	27	150	-	-	-	-	-	-	-
		1A-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	68	-	-	ND	ND	-	-	7.7	-	5.4	6.9	-	-	ND	-	-	-	ND	-	-	ND	5.1	ND	ND	ND	20	25	-	-	-	-	-	-	-
		1A-3-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	35	-	-	ND	ND	-	-	4.7	-	3.4	3.9	-	-	ND	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	14	17	-	-	-	-	-	-	-
	1A-4	1A-4-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	3.4	-	-	100	-	-	ND	ND	-	-	15	-	6.8	43	-	-	140	5.1	-	ND	0.22	-	-	ND	11	ND	ND	ND	26	210	-	-	-	-	-	-	-
		1A-4-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	83	-	-	ND	ND	-	-	14	-	8	16	-	-	4.2	-	-	-	ND	-	-	ND	9	ND	ND	ND	29	39	-	-	-	-	-	-	-
		1A-4-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	66	-	-	ND	ND	-	-	9	-	6.6	11	-	-	1.9	-	-	-	ND	-	-	ND	6.3	ND	ND	ND	24	29	-	-	-	-	-	-	-
		1A-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	55	-	-	ND	ND	-	-	7.7	-	5.7	7.7	-	-	1.7	-	-	-	ND	-	-	ND	5.4	ND	ND	ND	19	26	-	-	-	-	-	-	-
	L7	L-7 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	3.5	-	3.7	-	-	150	-	-	ND	3.4	-	-	17	-	5.4	100	-	-	290	15	-	-	0.2	-	-	ND	13	ND	ND	ND	24	200	-	-	-	-	-	-	-
		L-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L8	L-8 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	2.1	-	-	91	-	-	ND	ND	-	-	9.9	-	5.2	15	-	-	32	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	25	59	-	-	-	-	-	-	-
		L-8 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-8 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-11	L-11 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	3.9	-	8.8	-	-	600	-	-	ND	3.1	-	-	25	-	6.6	170	-	-	690	41	-	-	3.3	ND	-	ND	21	ND	ND	ND	27	1500	-	-	-	-	-	-	-
		L-11 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	1.8	-	-	73	-	-	ND	ND	-	-	8	-	4.6	9.8	-	-	2.5	-	-	-	0.1	-	-	ND	6.1	ND	ND	ND	21	30	-	-	-	-	-	-	-
		L-11 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-12	L-12 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	2.7	-	-	85	-	-	ND	ND	-	-	8.4	-	4.7	15	-	-	76	6	-	-	0.13	-	-	ND	6.5	ND	ND	ND	22	76	-	-	-	-	-	-	-
		L-12 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L7	L-7 @ 1'	02/26/2016	1.0	ND	63	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
		L-7 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	3	-	-	100	-	-	ND	ND	-	-	14	-	8.2	19	-	-	3.9	-	-	-	0.1	-	-	ND	10	ND	ND	ND	36	42	-	-	-	-	-	-	-
		L-7 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1.6	-	-	61	-	-	ND	ND	-	-	8.3	-	4.8	12	-	-	5.4	-	-	-	ND	-	-	ND	6	ND	ND	ND	22	29	-	-	-	-	-	-	-
	L8	L-8 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
		L-8 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	ND	-	-	33	-	-	ND	ND	-	-	4.1	-	1.9	3.8	-	-	1.3	-	-	-	0.19	-	-	ND	2.5	ND	ND	ND	11	13	-	-	-	-	-	-	-
		L-8 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	ND	-	-	37	-	-	ND	ND	-	-	4.7	-	2.4	3.8	-	-	1.2	-	-	-	ND	-	-	ND	2.9	ND	ND	ND	15	15	-	-	-	-	-	-	-
	L-11	L-11 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
		L-11 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	ND	-	-	42	-	-	ND	ND	-	-	5.2	-	3	4.7	-	-	1.4	-	-	-	ND	-	-	ND	4	ND	ND	ND	14	19	-	-	-	-	-	-	-
		L-11 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1	-	-	48	-	-	ND	ND	-	-	5.3	-	3	5.6	-	-	3.3	-	-	-	ND	-	-	ND	4.1	ND	ND	ND	14	20	-	-	-	-	-	-	-
	L-12	L-12 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
		L-12 @ 2'	02/26/2016	2.0	ND	110	-	-	ND	ND	ND	-	4.5	-	-	45	-	-	ND	ND	-	-	4.6	-	2.6	4.5	-	-	4.9	-	-	-	ND	-	-	ND	3.3	ND	ND	ND	14	19	-	-	17 (Arochlor 1260)	2.9 (4,4' - DDT [2C])	-	-
		L-12 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	ND	-	-	35	-	-	ND	ND	-	-	4	-	2.2	3.4	-	-	1	-	-	-	ND	-	-	ND	2.7	ND	ND	ND	12	14	-	-	-	-	-	-	-
	1B-1	1B-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.9	-	-	86	-	-	ND	ND	-	-	13	-	5.2	8.3	-	-	6.6	-	-	-	ND	-	-	4.4	8.4	ND	ND	ND	25	29	-	-	-	-	-	-	-
		1B-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	84	-	-	ND	ND	-	-	15	-	7.5	8.8	-	-	4.4	-	-	-	ND	-	-	3.3	12	ND	ND	ND	30	31	-	-	-	-	-	-	-
		1B-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	50	-	-	ND	ND	-	-	6.3	-	4	6.4	-	-	4.3	-	-	-	ND	-	-	ND	3.9	ND	ND	ND	18	24	-	-	-	-	-	-	-
		1B-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	1.3	-	-	69	-	-	ND	ND	-	-	8.4	-	5.5	9.7	-	-	19	-	-	-	0.19	-	-	ND	6	ND	ND	ND	21	32	-	-	-	-	-	-	-
	A-13-01	A01@5'	08/21/2013	5.0	6.9	ND	ND	ND	ND	-	ND	-	1.3	-	-	67	-	-	ND	1.2	-	-	9.8	-	5.6	12	-	-	8.2	-	-	-	0.069	-	-	ND	6.8	ND	ND	ND	27	41	-	-	-	-	-	-	-
		A01@30'	08/21/2013	30.0	35	18	ND	53	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@50'	08/21/2013	50.0	25	28	ND	55	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@60'	08/21/2013	60.0	ND	ND	ND	ND	9.2 (1,2,4-Trimethylbenzene)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@65'	08/21/2013	65.0	ND	ND	17	17	790,000 (Toluene) 15,000 (Ethylbenzene) 110,000 (Total Xylenes) 15,000 (Sec-Butylbenzene) 29,000 (n-Butylbenzene) 25,000 (Isopropylbenzene) 130,000 (n-Propoylbenzene) 870,000 (1,2,4-Trimethylbenzene) 220,000 (1,3,5-Trimethylbenzene)	-	ND	-	0.62	-	-	29	-	-	ND	ND	-	-	4	-	ND	3.5	-	-	ND	-	-	-	ND	-	-	ND	ND	ND	ND	ND	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A01@80'	08/21/2013	80.0	ND	ND	ND	ND	500 (Toluene) 420 (1,2,4-Trimethylbenzene)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2A, 2B, 2C	2A-1	2A-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	160	-	-	ND	ND	-	-	8.8	-	4.2	12	-	-	7.6	-	-	-	ND	-	-	ND	9.4	ND	ND	ND	19	46	-	-	-	-	-	-	-
		2A-1-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	84	-	-	ND	ND	-	-	11	-	7.3	12	-	-	6.3	-	-	-	ND	-	-	ND	7.8	ND	ND	ND	27	36	-	-	ND	ND	-	-	ND
		2A-1-3.0	05/15/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	42	-	-	ND	ND	-	-	5.5	-	4.1	5.7	-	-	5.8	-	-	-	ND	-	-	ND	3.7	ND	ND	ND	15	23	-	-	-	-	-	-	-
		2A-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	ND	-	-	1	-	-	ND	ND	-	-	7.7	-	2.8	5.5	-	-	10	-	-	-	ND	-	-	ND	4.8	ND	ND	ND	14	14	-	-	-	-	-	-	-
	2A-2	2A-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.9	-	-	85	-	-	ND	ND	-	-	8.8	-	5.6	18	-	-	28	-	-	-	ND	-	-	ND	7.5	ND	ND	ND	22	48	-	-	-	-	-	-	-
		2A-2-1.0	05/15/2017	1.0	ND	18	-	-	ND	ND	ND	-	1.4	-	-	59	-	-	ND	ND	-	-	8.1	-	5.3	8.4	-	-	6.5	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	21	31	-	-	ND	ND	-	-	ND
		2A-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	49	-	-	ND	ND	-	-	6.6	-	4.5	6.7	-	-	2.6	-	-	-	ND	-	-	ND	4.6	ND	ND	ND	18	23	-	-	-	-	-	-	-
		2A-2-5.0	05/15/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	58	-	-	ND	ND	-	-	8.6	-	5.5	6.9	-	-	1.2	-	-	-	ND	-	-	ND	5.1	ND	ND	ND	22	22	-	-	-	-	-	-	-
	P33-B1	MC-1	08/15/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	71	-	-	ND	ND	-	-	11	-	5	11	-	-	2.4	-	-	-	ND	-	-	ND	7.1	ND	ND	ND	21	33	-	-	ND	ND	ND	ND	ND
		MC-2	08/15/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	2.1	-	-	140	-	-	ND	1.3	ND	ND	15	-	8.5	23	-	-	4.7	-	-	-	0.12	-	-	ND	11	ND	ND	ND	38	52	-	-	-	-	-	-	-
		MC-3	08/15/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	136	-	-	ND	ND	-	-	3.3	-	2.9	3.8	-	-	ND	-	-	-	ND	-	-	ND	2.7	ND	ND	ND	11	15	-	-	-	-	-	-	-
	P33-B2	MC-1	08/7/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	33	-	-	ND	ND	-	-	4.4	-	2.4	4.5	-	-	1.1	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	11	17	-	-	-	-	-	-	-
		MC-2	08/7/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	130	-	-	ND	1.4	ND	ND	17	-	8.6	22	-	-	3.9	-	-	-	0.11	-	-	ND	12	ND	ND	ND	41	60	-	-	-	-	-	-	-
		MC-3	08/7/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	23	-	-	ND	ND	-	-	3	-	2.1	5.3	-	-	1	-	-	-	0.9	-	-	ND	2.2	ND	ND	ND	10	16	-	-	-	-	-	-	-
		MC-4	08/7/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	40	-	-	ND	ND	-	-	4.8	-	2.1	4	-	-	ND	-	-	-	ND	-	-	ND	2.3	ND	ND	ND	7.6	14	-	-	-	-	-	-	-
	P33-B3	MC-1	08/7/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	35	-	-	ND	ND	-	-	5.1	-	2.9	5.4	-	-	1.3	-	-	-	ND	-	-	ND	3.6	ND	ND	ND	14	19	-	-	-	-	-	-	-
		MC-2	08/7/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	1.7	-	-	120	-	-	ND	1.6	ND	ND	18	-	8.8	23	-	-	4.5	-	-	-	ND	-	-	ND	13	ND	ND	ND	41	60	-	-	-	-	-	-	-
		MC-3	08/7/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	27	-	-	ND	ND	-	-	3.5	-	2	3.5	-	-	ND	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	7.5	12	-	-	-	-	-	-	-
		MC-4	08/7/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	54	-	-	ND	ND	-	-	8.5	-	4.3	7.8	-	-	1.4	-	-	-	ND	-	-	ND	5.3	ND	ND	ND	20	26	-	-	-	-	-	-	-
		MC-5	08/7/2015	12.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.3	-	2.1	6.1	-	-	1.5	-	-	-	0.13	-	-	ND	2.2	ND	ND	ND	7.3	13	-	-	-	-	-	-	-
	P33-B4	MC-1	08/7/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	1	-	-	89	-	-	ND	ND	-	-	11	-	5.7	13	-	-	3	-	-	-	ND	-	-	ND	8.1	ND	ND	ND	25	38	-	-	ND	ND	ND	ND	ND
		MC-2	08/7/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	58	-	-	ND	ND	-	-	8	-	4.1	8.2	-	-	1.6	-	-	-	ND	-	-	ND	5.5	ND	ND	ND	17	26	-	-	ND	-	-	-	-
		MC-3	08/7/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.1	-	2	2.6	-	-	ND	-	-	-	ND	-	-	ND	1.9	ND	ND	ND	5.7	9.3	-	-	ND	-	-	-	-
		MC-4	08/7/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	20	-	-	ND	ND	-	-	2.7	-	1.5	2.4	-	-	ND	-	-	-	3.4	-	-	ND	1.7	ND	ND	ND	6.5	11	-	-	-	-	-	-	-
	P32-B1	MC-1	08/12/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	50	-	-	ND	ND	-	-	6.3	-	3.2	6	-	-	1.2	-	-	-	ND	-	-	ND	4.1	ND	ND	ND	16	21	-	-	ND	ND	ND	ND	ND
		MC-2	08/12/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	35	-	-	ND	ND	-	-	5.1	-	2.5	5.9	-	-	1.5	-	-	-	0.12	-	-	ND	3.4	ND	ND	ND	14	18	-	-	-	-	-	-	-
		MC-3	08/12/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	23	-	-	ND	ND	-	-	3.6	-	2	4.9	-	-	1.2	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	9.6	14	-	-	-	-	-	-	-
		MC-4	08/12/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	38	-	-	ND	ND	-	-	5.6	-	3.7	5.6	-	-	1.1	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	17	19	-	-	-	-	-	-	-
	P32-B2	MC-1	08/12/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	58	-	-	ND	ND	-	-	8.3	-	4.1	7.4	-	-	1.8	-	-	-	ND	-	-	ND	5.3	ND	ND	ND	19	26	-	-	-	-	-	-	-
		MC-2	08/12/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	1.1	-	-	52	-	-	ND	ND	-	-	8	-	3.9	10	-	-	2.5	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	18	26	-	-	-	-	-	-	-
		MC-3	08/12/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	32	-	-	ND	ND	-	-	4.2	-	2.3	4	-	-	1.2	-	-	-	ND	-	-	ND	2.7	ND	ND	ND	11	15	-	-	-	-	-	-	-
		MC-4	08/12/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	1.3	-	-	55	-	-	ND	ND	-	-	7.9	-	4.2	10	-	-	2.2	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	17	23	-	-	-	-	-	-	-
	RR-B1	MC-1	08/25/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	44	-	-	ND	ND	-	-	6.1	-	3.4	7.6	-	-	2.4	-	-	-	ND	-	-	ND	4.4	ND	ND	ND	15	22	-	-	ND	ND	-	-	ND
		MC-2	08/25/2015	5.0	ND	17	43	-	ND	ND	ND	-	ND	-	-	53	-	-	ND	ND	-	-	7.7	-	4.2	10	-	-	3.6	-	-	-	ND	-	-	ND	5.3	ND	ND	ND	19	27	-	-	-	-	-	-	-
		MC-3	08/25/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	1.2	-	-	64	-	-	ND	ND	-	-	9.4	-	4.9	12	-	-	5.9	-	-	-	ND	-	-	ND	6.3	ND	ND	ND	22	33	-	-	-	-	-	-	-
		MC-4	08/25/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	1.1	-	-	52	-	-	ND	ND	-	-	7.9	-	4	8.9	-	-	5.5	-	-	-	ND	-	-	ND	5.4	ND	ND	ND	20	28	-	-	-	-	-	-	-
		MC-5	08/25/2015	15.0	ND	ND	ND	-	ND	ND	ND	-	37	-	-	37	-	-	ND	ND	-	-	5.1	-	2.7	4.6	-	-	ND	-	-	-	ND	-	-	ND	3.3	ND	ND	ND	15	17	-	-	-	-	-	-	-

Table 10. Comparison of Unrestricted Land Use and Commercial/Industrial Screening Results - Soil Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																														pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
2A, 2B, 2C	RR-B2	MC-1	08/25/2015	2.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	46	-	-	ND	ND	-	-	6	-	3.5	6.2	-	-	1.2	-	-	-	ND	-	-	ND	4.3	ND	ND	ND	17	22	-	-	-	ND	ND	-	-
		MC-2	08/25/2015	5.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	86	-	-	ND	ND	-	-	11	-	6.1	11	-	-	2.4	-	-	-	ND	-	-	ND	8.2	ND	ND	ND	26	42	-	-	-	-	-	-	-
		MC-3	08/25/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	30	-	-	ND	ND	-	-	4.2	-	2.7	4.7	-	-	1.2	-	-	-	ND	-	-	ND	2.9	ND	ND	ND	10	15	-	-	-	-	-	-	-
		MC-4	08/25/2015	10.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.4	-	1.4	2.9	-	-	1	-	-	-	ND	-	-	ND	1.7	ND	ND	ND	6.2	12	-	-	-	-	-	-	-
		MC-5	08/25/2015	15.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	32	-	-	ND	ND	-	-	4.6	-	2.5	4.7	-	-	1.1	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	11	16	-	-	-	-	-	-	-
	RR-B3	MC-1	08/25/2015	2.5	ND	13	23	-	ND	ND	ND	-	2.3	-	-	150	-	-	ND	ND	-	-	12	-	4.1	14	-	-	41	-	-	-	0.18	-	-	ND	8.9	ND	ND	ND	19	42	-	-	-	ND	ND	-	-
		MC-2	08/25/2015	5.0	ND	12	15	-	ND	ND	ND	-	3.7	-	-	140	-	-	ND	ND	-	-	16	-	5.9	24	-	-	44	-	-	-	0.23	-	-	ND	15	ND	ND	ND	25	93	-	-	-	ND	ND	-	-
		MC-3	08/25/2015	7.5	ND	ND	ND	-	ND	ND	ND	-	2.5	-	-	130	-	-	ND	ND	-	-	17	-	6.1	21	-	-	24	-	-	-	0.18	-	-	ND	13	ND	ND	ND	30	66	-	-	-	-	-	-	-
		MC-4	08/25/2015	10.0	ND	12	31	-	ND	ND	ND	-	1.1	-	-	55	-	-	ND	ND	-	-	8.3	-	3.6	10	-	-	7.5	-	-	-	0.12	-	-	ND	5.1	ND	ND	ND	15	29	-	-	-	-	-	-	-
		MC-5	08/25/2015	15.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	50	-	-	ND	ND	-	-	5.3	-	2.7	5.4	-	-	1.4	-	-	-	ND	-	-	ND	3.6	ND	ND	ND	13	21	-	-	-	-	-	-	-
		MC-6	08/25/2015	20.0	ND	ND	ND	-	ND	ND	ND	-	ND	-	-	43	-	-	ND	ND	-	-	4.9	-	2.5	6	-	-	2	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	11	19	-	-	-	-	-	-	-
	R-13-02	R02@5'	08/21/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	1.5	-	-	68	-	-	ND	1.2	-	-	11	-	5.3	13	-	-	ND	-	-	-	0.078	-	-	ND	7.5	ND	ND	ND	31	37	-	-	-	-	-	-	-
		R02@45'	08/21/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R02@65'	08/21/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	1.2	-	-	190	-	-	ND	1	-	-	8.3	-	3.5	35	-	-	0.048	-	-	-	9.6	5.8	ND	ND	ND	21	37	-	-	-	-	-	-	-
	A-13-19	A19@5'	08/22/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	14	-	-	ND	ND	-	-	ND	-	ND	51	-	-	ND	-	-	-	0.058	-	-	ND	ND	ND	ND	ND	ND	66	-	-	-	-	-	-	-
		A19@35'	08/22/2013	35.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A19@45'	08/22/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A19@60'	08/22/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A19@80'	08/22/2013	80.0	ND	ND	ND	ND	ND	-	ND	-	2.1	-	-	55	-	-	ND	1.2	-	-	7.3	-	4	14	-	-	ND	-	-	-	0.05	-	-	9.6	4.6	ND	ND	ND	21	38	-	-	-	-	-	-	-
	A-13-20	A20@5'	09/23/2013	5.0	14	2.4	ND	16	ND	-	ND	-	ND	-	-	82	-	-	ND	1.7	-	-	12	-	6.8	16	-	-	35	-	-	-	0.097	-	-	ND	9	ND	ND	ND	33	110	-	-	-	-	-	-	-
		A20@25'	09/23/2013	25.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A20@65'	09/23/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	4.6	-	-	93	-	-	ND	3.2	-	-	12	-	6.4	16	-	-	ND	-	-	-	ND	-	-	12	9	ND	ND	ND	32	54	-	-	-	-	-	-	-
	A-13-21	A21@5'	09/20/2013	5.0	370	50	11	430	ND	-	ND	-	6	-	-	83	-	-	ND	2.7	-	-	16	-	6	250	-	-	170	-	-	-	0.12	-	-	ND	18	ND	ND	ND	25	160	-	-	-	-	-	-	-
		A21@35'	09/20/2013	35.0	13	19	1.9	33	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A21@65'	09/20/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	8.6	-	-	110	-	-	ND	ND	-	-	5.2	-	ND	3.6	-	-	ND	-	-	-	0.028	-	-	110	ND	ND	ND	ND	26	8.1	-	-	-	-	-	-	-
3	A-13-23	A23@5'	09/11/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	42	-	-	ND	ND	-	-	11	-	3.7	8	-	-	ND	-	-	-	0.07	-	-	ND	5.5	ND	ND	ND	21	27	-	-	-	-	-	-	-
		A23@20'	09/11/2013	20.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A23@50'	09/11/2013	50.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	51	-	-	ND	2.3	-	-	16	-	5.3	8.6	-	-	3	-	-	-	0.037	-	-	ND	5.3	ND	ND	ND	57	26	-	-	-	-	-	-	-
4	R-13-03	R03@5'	11/6/2013	5.0	6	ND	ND	ND	ND	-	ND	-	ND	-	-	34	-	-	ND	ND	-	-	5.6	-	ND	6	-	-	ND	-	-	-	0.028	-	-	ND	3.1	ND	ND	ND	14	16	-	-	-	-	-	-	-
		R03@45'	11/6/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R03@55'	11/6/2013	55.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	46	-	-	ND	ND	-	-	ND	-	ND	5.6	-	-	ND	-	-	-	ND	-	-	ND	ND	ND	ND	ND	16	36	-	-	-	-	-	-	-
	R-13-04	R04@5'	11/4/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	13	-	-	92	-	-	1.2	3.1	-	-	9.3	-	3.4	35	-	-	3.4	-	-	-	0.054	-	-	ND	19	ND	ND	ND	110	79	-	-	-	-	-	-	-
		R04@40'	11/4/2013	40.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	90	-	-	ND	1.2	-	-	14	-	7.4	24	-	-	ND	-	-	-	0.026	-	-	ND	11	ND	ND	ND	31	53	-	-	-	-	-	-	-
		R04@60'	11/4/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	5-1	5-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.5	-	-	72	-	-	ND	ND	-	-	7.9	-	5.6	12	-	-	20	-	-	-	ND	-	-	ND	6.6	ND	ND	ND	21	46	-	-	-	-	-	-	-
		5-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	2.1	-	-	84	-	-	ND	ND	-	-	10	-	5.3	19	-	-	68	4.8	-	ND	ND	-	-	ND	7.6	ND	ND	ND	22	99	-	-	-	-	-	-	-
		5-1-2.0	05/15/2017	2.0	-	-	-	-	-	-	ND	-	4.7	-	-	42	-	-	ND	ND	-	-	6	-	4.9	23	-	-	110	3.7	-	ND	0.11	-	-	ND	7	ND	ND	ND	18	130	-	-	-	-	-	-	-
		5-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	30	-	-	ND	ND	-	-	4.2	-	3.2	3.8	-	-	2.2	-	-	-	0.14	-	-	ND	2.7	ND	ND	ND	14	16	-	-	-	-	-	-	-
	5-2	5-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	4.1	-	-	75	-	-	ND	ND	-	-	15	-	8.5	20	-	-	48	-	-	-	ND	-	-	ND	14	ND	ND	ND	29	60	-	-	-	-	-	-	-
		5-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	52	-	-	ND	ND	-	-	5.9	-	4.5	9.6	-	-	19	-	-	-	ND	-	-	ND	5	ND	ND	ND	18	77	-	-	-	-	-	-	-
		5-2-2.0	05/15/2017	2.0	-	-	-	-	-	-	ND	-	ND	-	-	57	-	-	ND	ND	-	-	6.1	-	4.8	5.9	-	-	2.3	-	-	-	ND	-	-	ND	4.5	ND	ND	ND	17	23	-	-	-	-	-	-	-
		5-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	1.1	-	-	21	-	-	ND	ND	-	-	3.2	-	3.2	4.3	-	-	180	ND	-	ND	0.12	-	-	ND	4	ND	ND	ND	8.5	10	-	-	-	-	-	-	-
	L-9	L-9 @ 1'	02/12/2016	1.0	ND	190	-	-	ND	ND	2.3	-	3.4	-	-	72	-	-	ND	ND	-	-	7.9	-	4.4	20	-	-	64	-	-	-	ND	-	-	ND	7.3	ND	ND	ND	24	75	-	-	-	-	-	-	ND
		L-9 @ 2.5'	02/12/2016	2.5	-	-	-	-	ND	-	ND	-	2.2	-	-	44	-	-	ND	ND	-	-	6.3	-	2.9	7	-	-	16	-	-	-	ND	-	-	ND	4.3	ND	ND	ND	24	27	-	-	-	-	-	-	-
	L-10	L-10 @ 1'	02/12/2016	1.0	ND	260	-	-	ND	ND	ND	-	5	-	-	120	-	-	ND	ND	-	-	10	-	5	19	-	-	44	-	-	-	0.25	-	-	1.1	9.2	ND	ND	ND	23	68	-	-	-	-	-	-	ND
		L-10 @ 3'	02/12/2016	3.0	-	-	-	-	ND	-	ND	-	2.8	-	-	58	-	-	ND	ND	-	-	8.1	-	3.6	10	-	-	20	-	-	-	ND	-	-	ND	6	ND	ND	ND	22	47	-	-	-	-	-	-	-
6	6-1	6-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	1.5	-	-	69	-	-	ND	ND	-	-	6	-	3.3	7.2	-	-	11	-	-	-	0.14	-	-	ND	4.3	ND	ND	ND	14	28	-	-	-	-	-	-	-
		6-1-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	1.4	-	-	77	-	-	ND	ND	-	-	6.2	-	3.7	8.5	-	-	13	-	-	-	ND	-	-	ND	6.7	ND	ND	ND	15	33	-	-	+	ND	ND	-	ND
		6-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	70	-	-	ND	ND	-	-	8.2	-	6.6	7.4	-	-	3.3	-	-	-	ND	-	-	ND	6.1	ND	ND	ND	23	32	-	-	-	-	-	-	-
		6-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	66	-	-	ND	ND	-	-	8.1	-	6.3	6.5	-	-	1.2	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	24	28	-	-	-	-	-	-	-
	6-2	6-2-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	2.9	-	-	110	-	-	ND	ND	-	-	5.5	-	2.7	6.8	-	-	90	ND	-	ND	0.33	-	-	ND	3.2	ND	ND	ND	15	62	-	-	-	ND	ND	-	ND
		6-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	ND	-	1.2	-	-	87	-	-	ND	ND	-	-	8.2	-	5.7	15	-	-	38	-	-	-	0.78	-	-	ND	8	ND	ND	ND	26	89	-	-	-	-	-	-	-
		6-2-3.0	05/16/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	29	-	-	ND	ND	-	-	3.7	-	2.6	2.5	-	-	1.2	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	11	13	-	-	-	-	-	-	-
		6-2-5.0	05/16/2017	5.0	-	-	-	-	ND	-	ND	-	1.4	-	-	34	-	-	ND	ND	-	-	2.9	-	2.8	3	-	-	1.2	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	10	14	-	-	-	-	-	-	-
	6-3	6-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	46	-	-	ND	ND	-	-	5.8	-	3.5	5.7	-	-	9.1	-	-	-	ND	-	-	ND	3.5	ND	ND	ND	14	28	-	-	-	-	-	-	-
		6-3-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	8.3	-	11	-	-	1900	3.2	ND	ND	12	ND	0.99	69	3	9.2	250	33	-	4300	270	-	7.3	0.44	-	-	ND	31	1	ND	ND	22	10000	1100	-	-	ND	ND	-	ND
		6-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	1.6	-	-	160	-	-	ND	ND	-	-	8.7	-	3.5	21	-	-	250	ND	-	ND	ND	-	-	ND	5	ND	ND	ND	11	660	-	-	-	-	-	-	-
		6-3-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	21	-	-	ND	ND	-	-	3.1	-	2.3	2.4	-	-	1.1	-	-	-	0.4	-	-	ND	1.9	ND	ND	ND	12	13	-	-	-	-	-	-	-
	6-4	6-4-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.3	-	-	95	-	-	ND	ND	-	-	6.2	-	3.2	13	-	-	30	-	-	-	0.17	-	-	ND	5.6	ND	ND	ND	15	55	-	-	-	-	-	-	-
		6-4-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	26	1.1	ND	71	-	-	ND	1.2	-	-	11	-	4.6	41	-	-	94	5.4	-	ND	ND	-	-	ND	8.4	ND	ND	ND	19	960	-	-	-	ND	ND	-	ND
		6-4-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	11	-	-	41	-	-	ND	ND	-	-	6.3	-	4.2	7.1	-	-	16	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	18	32	-	-	-	-	-	-	-
		6-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	9	-	-	69	-	-	ND	ND	-	-	11	-	7.5	11	-	-	3.2	-	-	-	ND	-	-	ND	7	ND	ND	ND	29	59	-	-	-	-	-	-	-
	6-5	6-5-0.5	05/15/2017	0.5	-	-	-	-	-	-	4	-	9.1	-	-	95	-	-	ND	2.3	ND	ND	19	5	7.6	82	-	-	400	1.9	-	ND	0.17	-	-	ND	12	ND	ND	ND	21	950	-	-	-	-	-	-	-
		6-5-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	3.9	-	-	75	-	-	ND	ND	-	-	10	-	6.7	13	-	-	59	1.9	-	1.8	ND	-	-	ND	6.9	ND	ND	ND	27	83	-	-	-	-	-	-	-
		6-5-3.0	05/15/2017	3.0	ND	ND	-	-	ND	ND	ND	-	1	-	-	31	-	-	ND	ND	-	-	4.5	-	3.2	3.8	-	-	2.4	-	-	-	0.11	-	-	ND	2.8	ND	ND	ND	14	17	-	-	-	ND	ND	-	ND
		6-5-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	22	-	-	ND	ND	-	-	3.3	-	2.3	2.5	-	-	1.1	-	-	-	1.5	-	-	ND	2	ND	ND	ND	9.2	13	-	-	-	-	-	-	-
	6-6	6-6-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	1.1	-	-	120	-	-	ND	ND	-	-	15	-	8.3	13	-	-	12	-	-	-	0.12	-	-	ND	12	ND	ND	ND	34	45	-	-	-	-	-	-	-
		6-6-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	30	-	-	ND	ND	-	-	3.3	-	2.6	3	-	-	1.2	-	-	-	ND	-	-	ND	2.5	ND	ND	ND	10	13	-	-	-	-	-	-	-
		6-6-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	52	-	-	ND	ND	-	-	4.3	-	3	4	-	-	1.1	-	-	-	ND	-	-	ND	3	ND	ND	ND	14	14	-	-	-	-	-	-	-
		6-6-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	32	-	-	ND	ND	-	-	7.5	-	3.8	4.1	-	-	1.2	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	21	17	-	-	-	-	-	-	-
	6-7	6-7-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	55	-	-	ND	ND	-	-	7.5	-	5.3	6.1	-	-	3	-	-	-	ND	-	-	ND	5.4	ND	ND	ND	22	26	-	-	-	-	-	-	-
		6-7-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	25	-	-	ND	ND	-	-	3.7	-	2.7	3.2	-	-	2	-	-	-	0.12	-	-	ND	2.3	ND	ND	ND	12	14	-	-	-	-	-	-	-
		6-7-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	24	-	-	ND	ND	-	-	4.3	-	2.3	3.6	-	-	7.5	-	-	-	ND	-	-	ND	2.8	ND	ND	ND	12	29	-	-	-	-	-	-	-
		6-7-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	62	-	-	ND	ND	-	-	8.6	-	6	7.1	-	-	4.3	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	25	33	-	-	-	-	-	-	-
	6-8	6-8-1.0	05/15/2017	1.0	-	-	-	-	-	-	ND	-	5	-	-	100	-	-	ND	ND	-	-	7.5	-	4.5	97	-	-	140	3.6	-	0.28	0.1	-	-	ND	6.1	ND	ND	ND	21	210	-	-	-	-	-	-	-
		6-8-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	25	-	-	ND	ND	-	-	3.9	-	2.7	3	-	-	1	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	15	13	-	-	-	-	-	-	-
		6-8-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	47	-	-	ND	ND	-	-	6.3	-	4.8	4.3	-	-	1.4	-	-	-	ND	-	-	ND	4	ND	ND	ND	23	21	-	-	-	-	-	-	-
		6-8-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	17	-	-	ND	ND	-	-	1.7	-	1.8	ND	-	-	ND	-	-	-	4.6	ND	ND	ND	1.3	ND	ND	ND	7.2	10	-	-	-	-	-	-	-
	6-9	6-9-1.0	05/15/2017	1.0	-	-	-	-	ND	-	ND	-	ND	-	-	79	-	-	ND	ND	-	-	10	-	6.4	17	-	-	33	-	-	-	0.19	-	-	ND	9.1	ND	ND	ND	32	61	-	-	-	-	-	-	-
		6-9-3.0	05/15/2017	3.0	-	-	-	-	7.6 (TCE)	-	47	ND	9.4	-	-	110	-	-	ND	1.1	-	-	10	-	4.6	390	31	-	3100	32	-	6.5	1.4	-	-	ND	12	ND	1.7	ND	18	510	-	-	-	-	-	-	-
		6-9-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	81	-	-	ND	ND	-	-	8.1	-	5.5	41	-	-	41	-	-	-	0.2	-	-	ND	8.7	ND	ND	ND	23	56	-	-	-	-	-	-	-
		6-9-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	78	-	-	ND	ND	-	-	9.9	-	7.7	8.8	-	-	3.4	-	-	-	0.2	-	-	ND	7	ND	ND	ND	29	36	-	-	-	-	-	-	-
	6-10	6-10-1.0	05/15/2017	1.0	-	-	-	-	7.1 (TCE)	-	ND	-	ND	-	-	110	-	-	ND	ND	-	-	11	-	6.8	24	-	-	99	14	-	ND	0.29	-	-	ND	7.5	ND	ND	ND	27	92	-	-	-	-	-	-	-
		6-10-3.0	05/15/2017	3.0	-	-	-	-	7.2 (TCE)	-	5.5	-	6.5	-	-	380	-	-	ND	1.8	ND	ND	15	-	3.2	160	-	-	800	360	-	410	0.19	-	-	ND	9.4	ND	ND	ND	14	2100	-	-	-	-	-	-	-
		6-10-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	8.6	-	-	57	-	-	ND	ND	-	-	9	-	3.5	37	-	-	13	-	-	-	ND	-	-	ND	5	ND	ND	ND	17	31	-	-	-	-	-	-	-
		6-10-7.5	05/15/2017	7.5	-	-	-	-	-	-	ND	-	ND	-	-	38	-	-	ND	ND	-	-	4.8	-	3.6	3.2	-	-	1.2	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	16	17	-	-	-	-	-	-	-
	16-5	16-5 @ 1'	02/12/2016	1.0	ND	18	-	-	ND	ND	ND	-	2	-	-	56	-	-	ND	ND	-	-	6.6	-	3.5	8.4	-	-	19	-	-	-	ND	-	-	ND	4.7	ND	ND	ND	20	40	-	-	-	-	-	-	ND
		16-5 @ 3'	02/12/2016	3.0	-	-	-	-	ND	-	ND	-	2.1	-	-	55	-	-	ND	ND	-	-	7.1	-	3.5	9.4	-	-	19	-	-	-	0.15	-	-	ND	5.1	ND	ND	ND	21	39	-	-	-	-	-	-	-
		16-5 @ 4'	02/12/2016	4.0	-	-	-	-	ND	-	ND	-	2.3	-	-	59	-	-	ND	ND	-	-	8.4	-	3.7	8.8	-	-	21	-	-	-	ND	-	-	ND	5.6	ND	ND	ND	23	42	-	-	-	-	-	-	-
	16-6	16-6 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	2.4	-	-	55	-	-	ND	ND	-	-	6.3	-	3.5	.8	-	-	11	-	-	-	0.1	-	-	ND	4.8	ND	ND	ND	21	36	-	-	-	-	-	-	-
		16-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 10. Comparison of Unrestricted Land Use and Commercial/Industrial Screening Results - Soil Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																														pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
6	16-7	16-7 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	78	-	-	ND	ND	-	-	10	-	5.1	14	-	-	6.1	-	-	-	0.12	-	-	ND	8.2	ND	ND	ND	25	38	-	-	-	-	-	-
		16-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	1.6	-	-	55	-	-	ND	ND	-	-	6.8	-	4	7.3	-	-	4.3	-	-	-	ND	-	-	ND	5.2	ND	ND	ND	20	26	-	-	-	-	-	-
		16-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5	L-5 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.8	-	-	46	-	-	ND	ND	-	-	5.5	-	3.2	8.4	-	-	25	-	-	-	ND	-	-	ND	4.2	ND	ND	ND	17	32	-	-	-	-	-	-
		L-5 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-5 @ 4.5'	02/1/2016	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5	L-5 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
		L-5 @ 2'	02/26/2016	2.0	ND	ND	-	-	ND	930 (Phenol)	ND	-	ND	-	-	46	-	-	ND	ND	-	-	5.6	-	3.2	6.9	-	-	2.7	-	-	-	ND	-	-	ND	3.9	ND	ND	ND	18	23	-	-	+	ND	ND	-
		L-5 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	ND	-	-	30	-	-	ND	ND	-	-	3.9	-	2.2	2.8	-	-	ND	-	-	-	ND	-	-	ND	2.5	ND	ND	ND	14	14	-	-	-	-	-	-
	L-6	L-6 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	10	-	-	130	-	-	ND	ND	-	-	15	-	5.1	64	-	-	200	11	-	-	0.15	-	-	ND	12	ND	ND	ND	26	310	-	-	-	-	-	-
		L-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-6 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-6	L-6 @ 1'	02/26/2016	1.0	ND	6600	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240 (Arochlor 1260)	ND	-	-
		L-6 @ 2'	02/26/2016	2.0	ND	ND	-	-	ND	460 (Phenol)	ND	-	26	-	-	93	-	-	ND	ND	-	-	10	-	6	10	-	-	5.8	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	28	53	-	-	-	ND	ND	-
		L-6 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	17	-	-	48	-	-	ND	ND	-	-	5.5	-	3.3	5	-	-	2.4	-	-	-	ND	-	-	ND	3.8	ND	ND	ND	17	24	-	-	-	-	-	-
	18.1-GP-1	GP-1 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	73	-	-	ND	ND	0.053	-	11	-	4.5	19	ND	0.053	53	6.1	-	0.81	0.55	-	-	ND	12	ND	ND	ND	19	85	-	-	-	-	-	-
		GP-1 @ 2'	04/1/2016	2.0	-	-	480	480	-	-	ND	-	2.4	-	-	160	-	-	ND	1.6	-	-	10	-	4.3	23	ND	ND	74	3.6	-	0.17	0.75	-	-	ND	8.9	ND	ND	ND	22	230	-	-	-	-	-	-
		GP-1 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	ND	-	1.8	-	-	70	-	-	ND	ND	-	-	8	-	3.8	15	ND	ND	34	ND	-	ND	0.12	-	-	ND	7.6	ND	ND	ND	22	62	-	-	-	-	-	-
		GP-1 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	ND	-	1	-	-	41	-	-	ND	ND	-	-	5.5	-	3	4.7	ND	ND	1.6	ND	-	ND	ND	-	-	ND	3.9	ND	ND	ND	18	20	-	-	-	-	-	-
		GP-1 @ 6.5'	04/1/2016	6.5	-	-	29	29	-	-	7.3	-	2.2	-	-	100	-	-	ND	ND	-	-	8.8	-	3.5	44	1.7	ND	170	15	-	0.35	1.1	-	-	ND	15	ND	ND	ND	19	290	-	-	-	-	-	-
	18.1-GP-2	GP-2 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	ND	-	1.9	-	-	69	-	-	ND	ND	-	-	6.8	-	3.4	12	ND	ND	44	3.4	-	ND	1.3	-	-	ND	5.5	ND	ND	ND	19	100	-	-	-	-	-	-
		GP-2 @ 2'	04/1/2016	2.0	-	-	-	-	-	-	ND	-	ND	-	-	2100	-	-	ND	ND	-	-	38	-	ND	1400	98	7.4	8300	950	-	98	0.67	-	-	ND	47	ND	ND	ND	29	8300	-	-	-	-	-	-
		GP-2 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	ND	-	2	-	-	65	-	-	ND	ND	-	-	8.3	-	3.8	23	1.1	4.3	71	2.8	-	16	0.35	-	-	ND	7.6	ND	ND	ND	21	70	-	-	-	-	-	-
		GP-2 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	ND	-	ND	-	-	49	-	-	ND	ND	-	-	6.2	-	3.6	7.1	ND	ND	1.5	ND	-	ND	ND	-	-	ND	4.2	ND	ND	ND	22	24	-	-	-	-	-	-
	18.1-GP-3	GP-3 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	40	-	17	-	-	350	-	-	ND	ND	-	-	24	-	6.1	370	26	0.27	1600	88	-	3.8	98	-	-	ND	19	ND	ND	ND	31	1500	-	-	-	-	-	-
		GP-3 @ 2'	04/1/2016	2.0	-	24	1000	1000	-	-	ND	-	3.3	-	-	67	-	-	ND	ND	-	-	6.4	-	3.4	18	ND	ND	62	2.3	-	ND	0.11	-	-	ND	6.1	ND	ND	ND	19	92	-	-	-	-	-	-
		GP-3 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	ND	-	1.2	-	-	42	-	-	ND	ND	-	-	5.8	-	3.1	5.4	ND	ND	1.4	ND	-	ND	ND	-	-	ND	3.7	ND	ND	ND	20	20	-	-	-	-	-	-
		GP-3 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	ND	-	ND	-	-	44	-	-	ND	ND	-	-	4.6	-	2.8	4.4	ND	ND	1.5	ND	-	ND	ND	-	-	ND	3.2	ND	ND	ND	16	19	-	-	-	-	-	-
	18.1-1	18.1-1-1	10/22/2015	1.0	10	10	162	230	<various	-	<0.758	-	2	-	-	97.5	-	-	<0.253	1.78	-	-	10.4	-	6.34	23.8	-	-	61.1	3.77	-	-	0.182	-	-	0.779	13.8	<0.758	<0.253	<0.758	20.1	112	-	-	-	-	-	-
		18.1-1-3.5	10/22/2015	3.5	5	5.8	43	54	<various	-	<0.769	-	<0.769	-	-	63.9	-	-	<0.256	0.96	-	-	6.81	-	6.29	7.99	-	-	4.67	-	-	-	<0.0862	-	-	<0.256	6.1	<0.769	<0.256	<0.769	18.6	35.1	-	-	-	-	-	-
	18.1-2	18.1-2-1	10/22/2015	1.0	5	5	9.6	19	<various	-	<0.725	-	<0.725	-	-	146	-	-	<0.242	1.12	-	-	7.66	-	4.46	12.2	-	-	25.4	-	-	-	0.108	-	-	0.361	8.56	0.87	<0.242	<0.725	17.2	60.7	-	-	-	-	-	-
		18.1-2-2.0	10/22/2015	2.0	25	25	96	130	<various	-	<0.739	-	0.817	-	-	134	-	-	<0.246	1.44	-	-	11.5	-	5.8	95	-	-	293	35.1	-	3.59	0.18	-	-	0.356	47.9	<0.739	<0.246	<0.739	19.2	288	-	-	-	-	-	-
	18.1-3	18.1-3-1	10/22/2015	1.0	5	5	5	5	<various	-	<0.765	-	<0.765	-	-	72.6	-	-	0.286	1.39	-	-	9.72	-	8.66	12	-	-	3.47	-	-	-	0.103	-	-	0.341	21.6	<0.765	<0.255	<0.765	21.2	39.7	-	-	-	-	-	-
		18.1-3-3.5	10/22/2015	3.5	9.8	9.8	94	140	<various	-	<0.758	-	1.69	-	-	202	-	-	0.277	2.81	-	-	14.5	-	7.42	64.4	-	-	554	18.4	-	<0.100	0.862	-	-	0.256	19.3	<0.758	0.297	<0.758	26.6	545	-	-	-	-	-	-
	18.1-4	18.1-4-1	10/22/2015	1.0	5	5	36	59	<various	-	<0.725	-	8.51	-	-	443	-	-	<0.242	3.99	-	-	27.7	-	10.1	312	38.7	-	1010	102	-	4.06	1.24	-	-	<0.242	39.6	<0.725	0.258	<0.725	41.5	1400	-	-	-	-	-	-
		18.1-4-3.5	12/9/2015	3.5	5	5	5	5	<various	-	<0.750	-	3.59	-	-	72.9	-	-	<0.250	0.785	-	-	7.89	-	6.8	13.4	-	-	17.2	-	-	-	<0.0794	-	-	<0.250	7.04	0.961	<0.250	<0.750	22.4	68.6	-	-	-	-	-	-
	18.1-4A	18.1-4A-1	12/9/2015	1.0	5	5	77	170	<various	-	452	-	9.97	-	-	486	-	-	0.269	5.44	-	-	21.7	-	7.94	531	-	-	13900	-	-	8.39	0.468	-	-	<0.240	21.7	1.16	12.7	<0.721	30.6	2140	-	-	-	-	-	-
		18.1-4A-3.5	12/9/2015	3.5	5	5	100	220	<various	-	<0.739	-	4.58	-	-	99.3	-	-	<0.246	0.906	-	-	9.87	-	8.52	17.9	-	-	29.5	-	-	-	<0.0833	-	-	<0.246	9.27	2.08	<0.246	<0.739	27.1	68.8	-	-	-	-	-	-
	18.1-4B	18.1-4B-1	12/9/2015	1.0	5	5	8.4	20	<various	-	5.11	-	14	-	-	444	-	-	0.28	2.74	-	-	24.8	-	9.07	475	-	-	1690	-	-	21.3	0.341	-	-	<0.250	18.4	1.2	0.71	<0.750	30.9	1500	-	-	-	-	-	-
		18.1-4B-3.5	12/9/2015	3.5	5	5	5	5	<various	-	<0.750	-	2.99	-	-	64.8	-	-	<0.250	0.679	-	-	7.05	-	5.98	6.01	-	-	2.85	-	-	-	<0.0794	-	-	<0.250	5.87	1.68	<0.250	<0.750	22.2	36.6	-	-	-	-	-	-
	18.1-4C	18.1-4C-1	12/9/2015	1.0	5	5	21	47	<various	-	9.45	-	12.6	-	-	727	-	-	0.283	3.16	-	-	35.2	-	8.61	552	-	-	1930	-	-	4	0.439	-	-	<0.246	18	1.66	0.547	<0.739	26.9	1990	-	-	-	-	-	-
		18.1-4C-3.5	12/9/2015	3.5	5	5	5	5	<various	-	<0.750	-	3.55	-	-	70.9	-	-	<0.250	0.764	-	-	7.34	-	6.52	6.66	-	-	8.8	-	-	-	<0.0794	-	-	<0.250	6.65	10.3	<0.250	<0.750	22.2	56.3	-	-	-	-	-	-
	18.1-4D	18.1-4D-1	12/9/2015	1.0	5	5	52	91	<various	-	<0.725	-	10.7	-	-	474	-	-	0.315	2.89	-	-	30.6	-	8.72	308	-	-	1170	-	-	5.3	0.456	-	-	<0.242	25.2	1.4	0.434	<0.725	30.4	1550	-	-	-	-	-	-
		18.1-4D-3.5	12/9/2015	3.5	5	5	150	250	<various	-	3.49	-	10.6	-	-	463	-	-	0.296	3.15	-	-	27.9	-	8.73	535	-	-	2560	-	-	6.34	0.768	-	-	0.311	38.8	0.847	0.639	<0.750	37.7	1820	-	-	-	-	-	-
	18.1-5	18.1-5-1	12/9/2015	1.0	5	5	39	88	<various	-	9.35	-	7.35	-	-	451	-	-	0.408	4.95	-	-	26.1	-	11.6	452	-	-	2050	-	-	6.8	0.374	-	-	1.02	37.4	<0.750	0.622	<0.750	34.7	1310	-	-	-	-	-	-
		18.1-5-3.5	12/9/2015	3.5	5	5	369	1000	<various	-	7.5	-	2.32	-	-	208	-	-	0.277	2.31	-	-	12.3	-	7.09	232	-	-	1020	-	-	4.9	0.254	-	-	0.378	16.8	<0.750	0.472	<0.750	24.9	628	-	-	-	-	-	-
	18.1-6	18.1-6-1	12/9/2015	1.0	5	5	5.7	19	<various	-	2.68	-	0.798	-	-	153	-	-	<0.250	1.45	-	-	8.5	-	5.12	86.4	-	-	334	65.8	-	3.08	0.12	-	-	<0.250	7.49	<0.750	<0.250	<0.750	18.1	423	-	-	-	-	-	-
		18.1-6-3.5	12/9/2015	3.5	5	5	51	140	<various	-	22.8	-	2.45	-	-	196	-	-	0.261	2.49	-	-	12.4	-	7.74	311	-	-	1510	-	-	205	0.24	-	-	<0.250	11.7	<0.750	0.397	<0.750	26.6	597	-	-	-	-	-	-
	18.1-7	18.1-7-1	12/9/2015	1.0	5	5	63	150	<various	-	4.3	-	5.03	-	-	217	-	-	0.376	2.7	-	-	15	-	8.95	110	-	-	505	56.6	-	3.77	0.298	-	-	0.49	17.2	<0.750	0.335	<0.750	31.7	823	-	-	-	-	-	-
		18.1-7-3.5	12/9/2015	3.5	5	5	149	510	<various	-	1.88	-	1.46	-	-	121	-	-	0.264	1.67	-	-	10.5	-	7.45	53.1	-	-	122	15.3	-	5.79	0.115	-	-	<0.250	10.9	<0.750	<0.250	<0.750	27.5	178	-	-	-	-	-	-
	18.2-1	18.2-1-1	04/20/2016	1.0	5	5	5.6	11	11,000 (TCE)	-	<0.765	-	15.6	-	-	163	-	-	0.338	14.2	0.104	-	45.2	-	13	132	-	-	468	9.6	-	0.243	0.125	-	-	<0.255	22.8	<0.765	<0.255	<0.765	34.4	4910	53	-	-	-	-	-
		18.2-1-3.5	04/20/2016	3.5	5	5	5	5	<various	-	<0.781	-	<0.781	-	-	45.6	-	-	<0.260	<0.521	-	-	4.23	-	3.93	4.6	-	-	1.93	-	-	-	<0.0833	-	-	<0.260	3.69	<0.781	<0.260	<0.781	13.1	21.6	-	-	-	-	-	-
	18.2-2	18.2-2-1	04/20/2016	1.0	5	5	34	39	<various	-	3.44	-	2.25	-	-	112	-	-	0.313	0.519	-	-	12.2	-	9.72	43.1	-	-	86.8	12	-	-	0.168	-	-	<0.255	10.4	<0.765	<0.255	<0.765	32	17	-	-	-	-	-	-
		18.2-2-3.5	04/20/2016	3.5	5	5	160	300	67 (TCE)	-	93.1	-	17.1	-	-	1450	-	-	0.291	8.07	-	-	44.7	-	9.36	2770	23.6	-	16100	-	-	-	0.972	-	-	<0.254	32.7	<0.761	2.72	<0.761	28.5	8730	-	<0.100	-	-	-	-
	18.2-3	18.2-3-1	04/20/2016	1.0	5	5	22	50	8.0 (TCE)	-	2.42	-	2.05	-	-	152	-	-	0.344	0.889	-	-	13.8	-	8.58	107	-	-	433	54.5	-	0.958	0.284	-	-	<0.262	10.7	<0.785	<0.262	<0.785	30.9	299	-	-	-	-	-	-
		18.2-3-3.5	04/20/2016	3.5	5	5	47	68	53 (TCE)	-	5.11	-	4.75	-	-	207	-	-	0.28	2.84	-	-	13.1	-	7.46	828	-	-	1310	-	-	12.2	0.829	-	-	0.258	14	<0.739	0.829	<0.739	26.5	1260	-	-	-	-	-	-
	A-13-08	A08@5'	08/27/2013	5.0	300	5	ND	300	ND	-	ND	-	2.1	-	-	91	-	-	ND	ND	-	-	17	-	4.2	15	-	-	26	-	-	-	0.062	-	-	ND	7.5	ND	ND	ND	18	47	-	-	-	-	-	-
		A08@40'	08/27/2013	40.0	ND	ND	ND	ND	ND	-	ND	-	0.56	-	-	24	-	-	ND	ND	-	-	ND	-	ND	4.5	-	-	ND	-	-	-	0.046	-	-	ND	ND	ND	ND	ND	ND	13	-	-	-	-	-	-
		A08@55'	08/27/2013	55.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A08@65'	08/27/2013	65.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	14	-	-	ND	ND	-	-	5.6	-	ND	ND	-	-	ND	-	-	-	ND	-	-	ND	3.3	ND	ND	ND	ND	7.6	-	-	-	-	-	-
	R-13-09	R09@10'	08/27/2013	10.0	ND	ND	ND	ND	ND	-	ND	-	1.1	-	-	28	-	-	ND	ND	-	-	5.1	-	ND	5.2	-	-	ND	-	-	-	0.06	-	-	ND	3.3	ND	ND	ND	13	16	-	-	-	-	-	-
		R09@50'	08/27/2013	50.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R09@60'	08/27/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	A-13-10	R10@5'	08/29/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	52	-	-	ND	ND	-	-	5.8	-	4.2	5.6	-	-	ND	-	-	-	0.07	-	-	ND	4.2	ND	ND	ND	20	27	-	-	-	-	-	-
		R10@30'	08/29/2013	30.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R10@55'	08/29/2013	55.0	ND	ND	ND	ND	ND	-	ND	-	0.96	-	-	46	-	-	ND	ND	-	-	9	-	4.4	12	-	-	ND	-	-	-	0.024	-	-	ND	7.6	ND	ND	ND	17	31	-	-	-	-	-	-
	A-13-12	R12@5'	09/3/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	39	-	-	ND	ND	-	-	7.9	-	3.4	34	-	-	480	25	-	7.5	0.12	-	-	ND	4.7	ND	ND	ND	19	42	-	-	-	-	-	-
		R12@10'	09/3/2013	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@15'	09/3/2013	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@20'	09/3/2013	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@30'	09/3/2013	30.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R12@60'	09/3/2013	60.0	ND	ND	ND	ND	ND	-	ND	-	3.4	-	-	110	-	-	ND	2.4	-	-	30	-	11	24	-	-	54	-	-	-	0.054	-	-	ND	19	ND	ND	ND	54	69	-	-	-	-	-	-
7	7-1	7-1-0.5	05/16/2017	0.5	ND	62	-	-	ND	ND	ND	-	2.7	-	-	110	-	-	ND	ND	-	-	14	-	6.8	4500	12	-	45	-	-	-	0.13	-	-	ND	12	ND	ND	ND	30	100	-	-	-	-	-	-
		7-1-1.0	05/16/2017	1.0	ND	120	-	-	ND	ND	ND	-	1.2	-	-	120	-	-	ND	ND	-	-	8.8	-	4.8	700	140	-	69	6.4	-	0.47	0.22	-	-	ND	13	ND	ND	ND	24	270	-	-	-	ND	3.4 (4,4'-DDD [2C]) 5.9 (4,4'-DDE [2C]) 6.1 (4,4'-DDT [2C]) 2.5 (alpha-BHC [2C])	-	ND
	7-2	7-2-0.5	05/15/2017	0.5	ND	ND	-	-	ND	ND	ND	-	ND	-	-	93	-	-	ND	ND	-	-	6.1	-	4.3	8.3	-	-	27	-	-	-	0.18	-	-	ND	4.3	ND	ND	ND	19	57	-	-	-	ND	ND	-	ND
		7-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	ND	-	-	35	-	-	ND	ND	-	-	4.5	-	3.9	3.1	-	-	1.1	-	-	-	ND	-	-	ND	3.2	ND	ND	ND	15	17	-	-	-	-	-	-
		7-2-3.0	05/15/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	23	-	-	ND	ND	-	-	2.9	-	2.5	2.1	-	-	ND	-	-	-	0.19	-	-	ND	2.1	ND	ND	ND	11	13	-	-	-	-	-	-
		7-2-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	ND	-	-	24	-	-	ND	ND	-	-	2.7	-	2.2	ND	-	-	ND	-	-	-	ND	-	-	ND	1.9	ND	ND	ND	10	11	-	-	-	-	-	-
	7-3	7-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	ND	-	2.5	-	-	110	-	-	ND	ND	-	-	13	-	7.8	39	-	-	51	4.5	-	-	0.17	-	-	ND	11	ND	ND	ND	28	93	-	-	-	-	-	-
		7-3-1.0	05/15/2017	1.0	ND	ND	-	-	ND	ND	ND	-	1.1	-	-	77	-	-	ND	ND	-	-	8.3	-	6.1	11	-	-	33	-	-	-	0.11	-	-	ND	5.9	ND	ND	ND	26	44	-	-	-	ND	ND	-	ND
		7-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	61	-	-	ND	ND	-	-	7.1	-	5.3	6.8	-	-	7	-	-	-	ND	-	-	ND	4.8	ND	ND	ND	23	32	-	-	-	-	-	-
		7-3-5.0	05/15/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	34	-	-	ND	ND	-	-	4.6	-	3.3	3.1	-	-	ND	-	-	-	ND	-	-	ND	2.9	ND	ND	ND	18	15	-	-	-	-	-	-
	7-4	7-4-0.5	05/15/2017	0.5	ND	26	-	-	ND	ND	ND	-	1.1	-	-	130	-	-	ND	ND	-	-	12	-	8.2	36	-	-	70	5.5	-	ND	0.11	-	-	ND	9.3	1.2	ND	ND	32	150	-	-	-	ND	ND	-	ND
		7-4-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	ND	-	-	100	-	-	ND	ND	-	-	9.8	-	6.2	44	-	-	43	-	-	-	0.12	-	-	ND	9.5	1.1	ND	ND	26	130	-	-	-	-	-	-
		7-4-3.0	05/15/2017	3.0	ND	6300	-	-	ND	ND	ND	-	ND	-	-	92	-	-	ND	ND	-	-	11	-	7.6	13	-	-	31	-	-	-	0.64	-	-	ND	8.4	ND	ND	ND	29	80	-	-	-	-	-	-
		7-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	ND	-	2.3	-	-	150	-	-	ND	ND	-	-	13	-	4.6	35	-	-	12	-	-	-	ND	-	-	ND	22	ND	ND	ND	23	890	-	-	-	-	-	-
	7-5	7-5-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	ND	-	-	95	-	-	ND	ND	-	-	12	-	8	9.7	-	-	4.5	-	-	-	ND	-	-	ND	8.3	ND	ND	ND	32	39	-	-	-	-	-	-
		7-5-1.0	05/16/2017	1.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	95	-	-	ND	ND	-	-	12	-	8.2	10	-	-	3	-	-	-	ND	-	-	ND	8.6	1	ND	ND	34	38	-	-	-	ND	ND	-	ND
		7-5-3.0	05/16/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	120	-	-	ND	ND	-	-	14	-	9.9	18	-	-	3.5	-	-	-	ND	-	-	ND	12	1.1	ND	ND	38	46	-	-	-	-	-	-
		7-5-5.0	05/16/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	31	-	-	ND	ND	-	-	6.7	-	3.6	2.7	-	-	1	-	-	-	ND	-	-	ND	3	ND	ND	ND	28	16	-	-	-	-	-	-

Table 10. Comparison of Unrestricted Land Use and Commercial/Industrial Screening Results - Soil Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	Total Petroleum Hydrocarbons (EPA 8015B (M))				VOCs (EPA 8260B) (µg/kg)	SVOCs (EPA 8270C) (µg/kg)	Title 22 Metals (EPA 6010B/7471A)																														pH	Polychlorinated Biphenyls (EPA 8082) µg/kg	Organochlorine Pesticides (EPA 8081) µg/kg	Organophosphorous Pesticides (EPA 8081) µg/kg	Chlorinated Herbicides (EPA 8151A) µg/kg
					TPH GRO mg/kg	TPH DRO mg/kg	TPH ORO mg/kg	TPH Total mg/kg			Antimony mg/kg	STLC Antimony mg/L	Arsenic mg/kg	STLC Arsenic mg/L	TCLP Arsenic mg/L	Barium mg/kg	STLC Barium mg/L	TCLP Barium mg/L	Beryllium mg/kg	Cadmium mg/kg	STLC Cadmium mg/L	TCLP Cadmium mg/L	Chromium mg/kg	Hexavalent Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	STLC Copper mg/L	TCLP Copper mg/L	Lead mg/kg	STLC Lead (CA-WET) mg/L	STLC Lead (DI-WET) mg/L	TCLP Lead mg/L	Mercury mg/kg	STLC Mercury mg/L	TCLP Mercury mg/L	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	STLC Zinc mg/L	TCLP Zinc mg/L					
7	7-6	7-6-0.5	05/16/2017	0.5	ND	200	-	-	ND	ND	ND	-	1.2	-	-	91	-	-	ND	ND	-	-	8.4	-	5.2	28	-	-	31	-	-	-	0.13	-	-	ND	7.3	ND	ND	ND	23	77	-	-	-	ND	ND	-	ND
		7-6-1.0	05/16/2017	1.0	-	-	-	-			ND	-	ND	-	-	93	-	-	ND	ND	-	-	8.7	-	5.7	28	-	-	22	-	-	-	0.16	-	-	ND	6.7	ND	ND	ND	24	60	-	-	-	-	-	-	-
		7-6-3.0	05/16/2017	3.0	-	-	-	-	-	-	ND	-	ND	-	-	78	-	-	ND	ND	-	-	8.2	-	5.2	12	-	-	13	-	-	-	ND	-	-	ND	6.1	ND	ND	ND	23	50	-	-	-	-	-	-	-
		7-6-5.0	05/16/2017	5.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	40	-	-	ND	ND	-	-	5	-	3.5	4.6	-	-	2.7	-	-	-	ND	-	-	ND	3.4	ND	ND	ND	16	19	-	-	-	-	-	-	-
	7-7	7-7-0.5	05/16/2017	0.5	-	-	-	-			ND	-	ND	-	-	110	-	-	ND	ND	-	-	14	-	9.3	13	-	-	3.7	-	-	-	ND	-	-	ND	10	ND	ND	ND	35	41	-	-	-	-	-	-	-
		7-7-1.0	05/16/2017	1.0	-	-	-	-	-	-	ND	-	ND	-	-	130	-	-	ND	ND	-	-	12	-	11	9.6	-	-	2.3	-	-	-	ND	-	-	ND	9.4	ND	ND	ND	37	47	-	-	-	ND	ND	-	ND
		7-7-3.0	05/16/2017	3.0	ND	ND	-	-	ND	ND	ND	-	ND	-	-	26	-	-	ND	ND	-	-	5	-	2.9	2.2	-	-	ND	-	-	-	ND	-	-	ND	2.4	ND	ND	ND	22	13	-	-	-	-	-	-	-
		7-7-5.0	05/16/2017	5.0	ND	470	-	-	ND	ND	ND	-	ND	-	-	17	-	-	ND	ND	-	-	3.2	-	2.1	ND	-	-	ND	-	-	-	ND	-	-	ND	1.8	ND	ND	ND	14	12	-	-	-	-	-	-	-
	L-2	L-2 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.8	-	-	97	-	-	ND	ND	-	-	8.7	-	4.7	11	-	-	6.4	-	-	-	ND	-	-	ND	6.5	ND	ND	ND	23	37	-	-	-	-	-	-	-
		L-2 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-3	L-3 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	1.6	-	-	68	-	-	ND	ND	-	-	6.4	-	3.9	21	-	-	22	-	-	-	0.1	-	-	ND	6.1	ND	ND	ND	18	81	-	-	-	-	-	-	-
		L-3 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-3 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-4	L-4 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	ND	-	3.6	-	-	250	-	-	ND	1.5	-	-	11	-	5.3	84	-	-	98	6	-	-	0.27	-	-	ND	12	ND	ND	ND	25	290	-	-	-	-	-	-	-
		L-4 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	ND	-	1.5	-	-	86	-	-	ND	ND	-	-	9	-	5.7	9.6	-	-	2	-	-	-	ND	-	-	ND	6.9	ND	ND	ND	27	38	-	-	-	-	-	-	-
		L-4 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-2	L-2 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-2 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	1	-	-	33	-	-	ND	ND	-	-	4.1	-	2.4	3.7	-	-	1.2	-	-	-	ND	-	-	ND	3.1	ND	ND	ND	12	16	-	-	-	-	-	-	-
		L-2 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1.3	-	-	37	-	-	ND	ND	-	-	5.2	-	2.9	4.4	-	-	1.4	-	-	-	ND	-	-	ND	3.7	ND	ND	ND	17	20	-	-	-	-	-	-	-
	L-3	L-3 @ 1'	02/26/2016	1.0	ND	18	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-3 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	1.6	-	-	88	-	-	ND	ND	-	-	9.8	-	6.3	9.5	-	-	2.3	-	-	-	ND	-	-	ND	7.2	ND	ND	ND	30	41	-	-	-	-	-	-	-
		L-3 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	1.7	-	-	89	-	-	ND	ND	-	-	10	-	6.6	9.8	-	-	2.4	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	31	41	-	-	-	-	-	-	-
	L-4	L-4 @ 1'	02/26/2016	1.0	ND	20	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-4 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	2.2	-	-	130	-	-	ND	ND	-	-	12	-	6.7	26	-	-	14	-	-	-	ND	-	-	ND	9.9	ND	ND	ND	31	96	-	-	-	-	-	-	-
		L-4 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	ND	-	2.6	-	-	130	-	-	ND	ND	-	-	12	-	5.3	37	-	-	67	-	-	-	0.17	-	-	ND	11	ND	ND	ND	24	150	-	-	-	-	-	-	-
	20-1	20-1-1	04/20/2016	1.0	<5	<5	25	42	<various	-	<0.789	-	2.7	-	-	172	-	-	<0.263	1.33	-	-	24.8	-	6.72	73.9	-	-	240	13.4	-	0.5	1.22	-	-	1.02	9.96	<0.789	0.401	<.789	25.8	170	-	-	-	-	-	-	-
	A-13-14	A14@10'	09/5/2013	10.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	46	-	-	ND	1.2	-	-	9.1	-	4.4	6.8	-	-	ND	-	-	-	0.036	-	-	ND	4.8	ND	ND	ND	33	26	-	-	-	-	-	-	-
		A14@20'	09/5/2013	20.0	6	16	2.4	25	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A14@45'	09/5/2013	45.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A14@60'	09/5/2013	60.0	ND	ND	ND	ND	ND	-	ND	-	ND	-	-	20	-	-	ND	ND	-	-	ND	-	ND	ND	-	-	ND	-	-	-	0.1	-	-	ND	3.5	ND	ND	ND	ND	13	-	-	-	-	-	-	-
	A-13-15	R15@5'	08/23/2013	5.0	ND	ND	ND	ND	ND	-	ND	-	1.4	-	-	50	-	-	ND	ND	-	-	9.4	-	3.2	34	-	-	18	-	-	-	0.074	-	-	ND	4.7	ND	ND	ND	17	58	-	-	-	-	-	-	-
		R15@50'	08/23/2013	50.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		R15@60'	08/23/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	8-1	8-1-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	250	14	-	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-1-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	130	6	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-1-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-1-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8-2	8-2-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-2-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-2-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8-3	8-3-0.5	05/16/2017	0.5	-	-	-	-	-	-	ND	-	2.4	-	-	110	-	-	ND	ND	-	-	12	-	6.9	140	-	-	49	-	-	-	ND	-	-	ND	9.6	ND	ND	ND	28	120	-	-	-	-	-	-	-
		8-3-1.0	05/16/2017	1.0	ND	ND	-	-	ND	ND	ND	-	1.5	-	-	70	-	-	ND	ND	-	-	7.3	-	4.9	34	-	-	35	-	-	-	ND	-	-	ND	7.4	ND	ND	ND	21	65	-	-	-	ND	ND	-	ND
		8-3-3.0	05/16/2017	3.0	-	-	-	-	-	-	ND	-	2.6	-	-	110	-	-	ND	1.7	ND	ND	11	-	6	41	-	-	65	11	-	ND	0.11	-	-	ND	12	1.2	ND	ND	23	210	-	-	-	-	-	-	-
		8-3-5.0	05/16/2017	5.0	ND	ND	-	-	ND	ND	ND	-	2.3	-	-	68	-	-	ND	ND	-	-	22	ND	12	23	-	-	5.9	-	-	-	0.14	-	-	ND	20	ND	ND	ND	44	52	-	-	-	-	-	-	-
	L-1	L-1 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	8.9	-	-	530	-	-	ND	ND	-	-	15	-	7.4	85	-	-	310	41	-	-	ND	-	-	ND	13	ND	ND	ND	32	870	-	-	-	-	-	-	-
		L-1 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	ND	-	-	120	-	-	ND	ND	-	-	14	-	7.8	19	-	-	4.6	-	-	-	0.2	-	-	ND	9.6	ND	ND	ND	29	50	-	-	-	-	-	-	-
		L-1 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-1	L-1 @ 1'	02/26/2016	1.0	ND	ND	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		L-1 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	ND	-	2.3	-	-	140	-	-	ND	ND	-	-	12	-	6.8	20	-	-	20	-	-	-	ND	-	-	ND	9.6	ND	ND	ND	29	99	-	-	-	-	-	-	-
		L-1 @ 3'	02/26/2016	3.0	ND	ND	-	-	ND	ND	ND	-	2.6	-	-	160	-	-	ND	ND	-	-	12	-	6.7	20	-	-	18	-	-	-	0.11	-	-	ND	10	ND	ND	ND	28	87	-	-	-	ND	ND	-	-
9	9-1	9-1-0.5	05/17/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	740	34	ND	0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-
		9-1-1.0	05/17/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94	3.2	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-1-3.0	05/17/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-1-5.0	05/17/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9-2	9-2-0.5	05/17/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	5.3	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-2-1.0	05/17/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	630	50	ND	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	7.6	-	-	-	-
	9-3	9-3-0.5	05/17/2017	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	1	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-3-1.0	05/17/2017	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-3-3.0	05/17/2017	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9-3-5.0	05/17/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	A-13-17	A17@5'	11/16/2013	5.0	1.2	ND	ND	ND	ND	-	84	-	-	7.1	-	3.6	7.4	-	-	ND	-	-	-	0.03	-	-	ND	5.2	ND	ND	ND	23	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@10'	11/16/2013	10.0	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@15'	11/16/2013	15.0	ND	ND	ND	ND	ND	-	ND	-	8.3	-	-	78	-	-	ND	2.4	-	-	21	-	14	25	-	-	6.3	-	-	-	0.074	-	-	ND	21	ND	ND	ND	41	73	-	-	-	-	-	-	-
		A17@25'	11/16/2013	25.0	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@40'	11/16/2013	40.0	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		A17@60'	11/16/2013	60.0	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trigger Level for Performing State Leachate Analysis (10×STLC)					NE	NE	NE	NE	2,040 (TCE)	varies	150	15 (STLC)	50	5 (STLC)	-	1,000	100 (STLC)	-	8	10	1 (STLC)	-	50	50	800	250	25 (STLC)	-	50	5 (STLC)	1.5 (STLC)	-	2	0.2 (STLC)	-	3,500	200	10	50	70	240	2,500	250 (STLC)	-	-	-	1,000 (DDT/DDE/DDD)	varies	varies
Trigger Level for Performing State and Federal Leachate Analysis (20×TCLP)					NE	NE	NE	NE	10 (TCE)	varies	NE	-	100	-	5 (TCLP)	2,000	-	100 (TCLP)	NE	20	-	1 (TCLP)	100	-	NE	NE	-	-	100	-	-	5 (TCLP)	4	-	0.2 (TCLP)	NE	NE	20	100	NE	NE	NE	-	-	-	varies	varies	varies
State Hazardous Disposal Criteria (TTLC)					NE	NE	NE	NE	2,040 (TCE)	varies	500	-	500	-	-	10,000	-	-	75	100	-	-	2,500	500	8,000	2,500	-	-	1,000	-	-	-	20	-	-	3,500	2,000	100	500	700	2,400	5,000	-	-	-	1,000 (DDT/DDE/DDD)	varies	varies
Screening Level for Keeping Soil on Site (OEHHA [a])					100	1,000	1,000	1,000	-	varies	30	-	12 [b]	-	-	5,200	-	-	16	1.7	-	-	100,000	17 [c]	660	3,000	-	-	80	-	-	-	18	-	-	380	1,600	380	380	5	530	23,000	-	-	-	300	2,300 (DDD) 1,600 (DDE) 1,600 (DDT)	varies	varies
Screening Level for Keeping Soil on Site (OEHHA [d])					100	1,000	1,000	1,000	-	varies	380	-	12 [b]	-	-	63,000	-	-	190	7.5	-	-	100,000	37 [c]	3,200	38,000	-	-	320	-	-	-	180	-	-	4,800	16,000	4,800	4,800	63	6,700	######	-	-	-	300	2,300 (DDD) 1,600 (DDE) 1,600 (DDT)	varies	varies

Notes:

bold - Value detected above a trigger/screening value

[a] Office of Environmental Health Hazard Assessment (OEHHA) Residential Scenario's Soil-Screening Numbers (mg/kg soil) for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion and Dermal Absorption

[b] California EPA/DTSC background levels of Arsenic in Southern California for near surface soils

[c] Screening numbers for Chromium VI are used here. The screening value for Chromium III is 100,000 mg/kg.

[d] Office of Environmental Health Hazard Assessment (OEHHA) Commercial/Industrial Scenario's Soil-Screening Numbers (mg/kg soil) for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion and Dermal Absorption

µg/kg - microgram per kilogram

mg/kg - milligram per kilogram

mg/L - milligram per liter

ND - Not Detected (below Reporting Limit)

NE - Not Established

Concentrations between Residential & Commercial/Industrial Screening Levels

HAI
HIGHLAND ASSOCIATES, INC.
Environmental and Earthquake Engineers

Table 11. Comparison of Unrestricted Land Use and Commercial/Industrial Screening Results - Soil Gas and Ambient Air Samples

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	TPH GRO µg/m³ (TO-3)	VOCs, µg/m³ (TO-15)																
						Benzene	Carbon Tetrachloride	1,2-Dichloroethane	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Ethylbenzene	Mercury (elemental)	Methyl tert-Butyl Ether	Naphthalene	Tetrachloroethylene	Tetraethyl Lead	Toluene	1,1,1-Trichloroethane	Trichloroethylene	Vinyl Chloride	m,p-Xylene	o-Xylene	Other VOCs
2A, 2B, 2C	2A-1	2A-1-5	05/16/2017	5.0	-	6.4	ND	ND	ND	ND	ND	-	ND	ND	830	-	28	85	ND	ND	10	ND	-
		2A-1-10	05/16/2017	10.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**460**	-	8.5	53	ND	ND	ND	ND	-
		2A-1-15	05/16/2017	15.0	-	5.6	ND	ND	ND	ND	ND	-	ND	ND	**360**	-	12	63	ND	ND	ND	20	-
	2A-2	2A-2-5	05/16/2017	5.0	-	5.7	ND	ND	ND	ND	27	-	ND	ND	**370**	-	16	230	ND	ND	61	39	-
		2A-2-5 Dup	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**380**	-	14	220	ND	ND	19	8.9	-
		2A-2-10	05/16/2017	10.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**280**	-	9.1	200	ND	ND	13	8.1	-
		2A-2-15	05/16/2017	15.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	130	-	9.8	110	ND	ND	ND	ND	-
	2A-3	2A-3-5	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	25	-	ND	20	ND	ND	ND	8.1	-
		2A-3-10	05/16/2017	10.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	28	-	ND	25	ND	ND	ND	ND	-
		2A-3-15	05/16/2017	15.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	29	-	9.8	24	ND	ND	13	ND	-
	2A-Am	2A-Am	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
	P33-VP-1	VP-1	08/5/2015	5.0	3700	0.86	ND	ND	ND	ND	2	-	ND	ND	20	-	30	30	40	ND	20	3	-
	P33-VP-2	VP-2	08/5/2015	5.0	1900	0.89	ND	ND	ND	ND	1	-	ND	ND	30	-	10	70	-	ND	10	2	-
	P33-VP-3	VP-3	08/5/2015	5.0	2100	0.89	ND	ND	ND	ND	2	-	ND	ND	30	-	20	90	-	ND	20	3	-
		VP-3 Dup	08/5/2015	5.0	3000	ND	ND	ND	ND	ND	2	-	ND	ND	40	-	10	160	420	ND	10	3	-
	P33-VP-4	VP-4	08/5/2015	5.0	2700	0.83	ND	ND	ND	ND	4	-	ND	2	4	-	80	ND	2	ND	30	4	-
	P33-VP-5	VP-5	08/5/2015	5.0	3700	0.83	ND	ND	ND	ND	3	-	ND	ND	20	-	40	80	80	ND	20	4	-
	P33-VP-6	VP-6	08/5/2015	5.0	1700	1	ND	ND	ND	ND	2	-	ND	ND	6	-	30	3	10	ND	10	2	-
	P33-VP-7	VP-7	08/5/2015	5.0	1900	0.89	ND	ND	ND	ND	3	-	ND	ND	40	-	20	40	ND	ND	20	4	-
	P33-VP-8	VP-8	08/5/2015	5.0	2200	1	ND	ND	ND	ND	3	-	ND	ND	20	-	10	20	ND	ND	20	4	-
	P33-VP-9	VP-9	08/5/2015	5.0	2000	0.89	ND	ND	ND	ND	3	-	ND	ND	40	-	40	9	2	ND	20	5	-
		VP-9 Dup	08/5/2015	5.0	2600	2	ND	ND	ND	ND	3	-	ND	ND	20	-	20	9	2	ND	20	4	-
	P33-VP-10	VP-10	08/5/2015	5.0	2600	ND	ND	ND	ND	ND	ND	-	ND	ND	2	-	2	ND	ND	ND	ND	ND	-
	P33-VP-11	VP-11	08/5/2015	5.0	4300	ND	ND	ND	ND	ND	2	-	ND	ND	20	-	10	7	ND	ND	20	3	-
	P33-VP-12	VP-12	08/5/2015	5.0	2900	ND	ND	ND	ND	ND	2	-	ND	ND	70	-	10	3	ND	ND	10	3	-
	P32-VP-1	VP-1	08/7/2015	5.0	2000	2	ND	ND	ND	ND	1	-	ND	ND	20	-	2	5	ND	3	10	2	-
	P32-VP-2	VP-2	08/7/2015	5.0	3100	6	ND	ND	ND	ND	1	-	ND	6	ND	-	10	ND	ND	ND	10	2	-
	P32-VP-3	VP-3	08/7/2015	5.0	4200	ND	ND	ND	ND	ND	ND	-	ND	ND	10	-	0.94	8	ND	ND	ND	ND	-
	P32-VP-4	VP-4	08/7/2015	5.0	12000	ND	ND	ND	ND	ND	10	-	ND	2	6	-	280	5	ND	ND	120	20	-
	P32-VP-5	VP-5	08/7/2015	5.0	7100	1	ND	ND	ND	ND	2	-	ND	ND	10	-	4	4	ND	1	10	2	-
	P32-VP-6	VP-6	08/7/2015	5.0	2400	2	ND	ND	ND	ND	2	-	ND	3	7	-	8	3	ND	ND	20	4	-
	P32-VP-7	VP-7	08/7/2015	5.0	2700	0.93	ND	ND	ND	ND	ND	-	ND	ND	9	-	2	6	ND	ND	7	1	-
		VP-7 Dup	08/7/2015	5.0	2100	1	ND	ND	ND	ND	3	-	ND	**40**	9	-	4	6	ND	1	30	6	-
	P32-VP-8	VP-8	08/7/2015	5.0	2200	ND	ND	ND	ND	ND	ND	-	ND	1	8	-	ND	7	ND	ND	ND	ND	-
	P32-VP-9	VP-9	08/7/2015	5.0	2400	4	ND	ND	ND	ND	5	-	ND	4	5	-	30	3	ND	0.87	70	20	-
	P32-VP-10	VP-10	08/7/2015	5.0	4200	ND	ND	ND	ND	ND	20	-	ND	2	2	-	210	ND	ND	0.69	150	30	-
	P32-VMW-1	VMW-1	11/23/2016	10.0	300	ND	ND	ND	ND	ND	ND	-	ND	ND	10	-	50	ND	ND	ND	20	ND	-
		VMW-1 Dup	11/23/2016	10.0	780	ND	ND	ND	ND	ND	ND	-	ND	ND	**490**	-	40	ND	ND	ND	ND	ND	-
	P32-VMW-2	VMW-2	11/23/2016	5.0	390	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	40	ND	ND	ND	ND	ND	-
	P32-VMW-3	VMW-3	11/23/2016	15.0	1500	**70**	ND	ND	ND	ND	8	-	ND	ND	50	-	90	ND	10	ND	40	5	-
	P32-VMW-4	VMW-4	11/23/2016	10.0	370	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	30	ND	ND	ND	ND	ND	-
	P32-VMW-1	VMW-1 10'	11/28/2016	10.0	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	10	-	60	5	ND	ND	ND	ND	-
	P32-VMW-2	VMW-2 5'	11/28/2016	5.0	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	9	-	60	ND	ND	ND	ND	ND	-
	P32-VMW-3	VMW-3 15'	11/28/2016	15.0	450	30	ND	ND	ND	ND	3	-	ND	ND	9	-	70	7	ND	ND	10	ND	-
		VMW-3 Dupl. 15'	11/28/2016	15.0	850	20	ND	ND	ND	ND	3	-	ND	ND	7	-	190	6	ND	ND	20	ND	-
	P32-VMW-4	VMW-4 10'	11/28/2016	10.0	360	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	90	ND	ND	ND	ND	ND	-
6	6-Am	6-Am	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-

Table 11. Comparison of Unrestricted Land Use and Commercial/Industrial Screening Results - Soil Gas and Ambient Air Samples (Cont'd)

PARC AREA	Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft below grade)	TPH GRO µg/m³ (TO-3)	VOCs, µg/m³ (TO-15)																
						Benzene	Carbon Tetrachloride	1,2-Dichloroethane	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Ethylbenzene	Mercury (elemental)	Methyl tert-Butyl Ether	Naphthalene	Tetrachloroethylene	Tetraethyl Lead	Toluene	1,1,1-Trichloroethane	Trichloroethylene	Vinyl Chloride	m,p-Xylene	o-Xylene	Other VOCs
7	7-1	7-1-5	05/16/2017	5.0	-	9	ND	ND	ND	ND	ND	-	ND	ND	**430**	-	11	ND	ND	ND	ND	ND	-
	7-3	7-3-5	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	**550**	-	ND	ND	38	ND	ND	ND	-
	7-4	7-4-5	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	23	ND	ND	ND	150	ND	-
		7-4-5 Dup	05/16/2017	5.0	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	22	ND	ND	ND	140	ND	-
	7-Am	7-Am	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
	7-Am Dup	7-Am Dup	05/16/2017	Ambient	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-1	VP-1	04/26/2016	5.0	120000	ND	ND	ND	ND	ND	ND	-	ND	ND	**310**	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-2	VP-2	04/26/2016	5.0	21000	ND	ND	ND	ND	ND	ND	-	ND	ND	**270**	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-3	VP-3	04/26/2016	5.0	27000	ND	ND	ND	ND	ND	ND	-	ND	ND	**390**	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-4	VP-4	04/26/2016	5.0	6500	ND	ND	ND	ND	ND	ND	-	ND	ND	1000	-	ND	ND	20	ND	ND	ND	-
		VP-4 Dup	04/26/2016	5.0	2000	ND	ND	ND	ND	ND	ND	-	ND	ND	**480**	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-5	VP-5	04/26/2016	3.0	7600	ND	ND	ND	ND	ND	ND	-	ND	ND	4700	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-6	VP-6	04/26/2016	5.0	6400	ND	ND	ND	ND	ND	ND	-	ND	ND	1400	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-7	VP-7	04/26/2016	3.0	7500	ND	ND	ND	ND	ND	ND	-	ND	ND	4300	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-8	VP-8	04/26/2016	5.0	5800	ND	ND	ND	ND	ND	ND	-	ND	ND	2600	-	ND	ND	ND	ND	ND	ND	-
	P20-VP-9	VP-9	04/26/2016	5.0	2800	ND	ND	ND	ND	ND	ND	-	ND	ND	120	-	20	ND	ND	ND	ND	ND	-
		VP-9 Dup	04/26/2016	5.0	4300	ND	ND	ND	ND	ND	ND	-	ND	ND	970	-	ND	ND	ND	ND	ND	ND	-
	P22-VP-1	VP-1	08/13/2015	5.0	6100	2	ND	ND	ND	ND	2	-	ND	2	70	-	7	ND	2	ND	10	2	-
	P22-VP-2	VP-2	08/13/2015	5.0	4900	2	ND	ND	ND	ND	3	-	ND	10	120	-	8	3	1	ND	20	5	-
	P22-VP-3	VP-3	08/13/2015	5.0	5600	ND	ND	ND	ND	ND	ND	-	ND	ND	80	-	3	ND	ND	ND	6	ND	-
	P22-VP-4	VP-4	08/13/2015	5.0	5200	3	ND	ND	ND	ND	3	-	ND	3	120	-	20	3	ND	ND	30	6	-
	P22-VP-5	VP-5	08/13/2015	5.0	7700	4	ND	ND	ND	ND	2	-	ND	5	6	-	10	30	ND	ND	20	3	-
	P22-VP-6	VP-6	08/13/2015	5.0	6500	ND	ND	ND	ND	ND	ND	-	ND	ND	**230**	-	3	5	ND	ND	5	ND	-
		VP-6 Dup	08/13/2015	5.0	5400	ND	ND	ND	ND	ND	ND	-	ND	ND	170	-	3	4	ND	ND	5	ND	-
	P22-VP-7	VP-7	08/13/2015	5.0	5100	ND	ND	ND	ND	ND	ND	-	ND	ND	**180**	-	3	3	ND	ND	6	ND	-
	P22-VP-8	VP-8	08/13/2015	5.0	6100	2	ND	ND	ND	ND	ND	-	ND	ND	160	-	4	5	ND	ND	6	1	-
	P22-VP-9	VP-9	08/13/2015	5.0	5800	ND	ND	ND	ND	ND	1	-	ND	3	**270**	-	3	4	ND	ND	10	3	-
	P22-VP-10	VP-10	08/13/2015	5.0	3600	4	ND	ND	ND	ND	2	-	ND	ND	2	-	10	ND	ND	ND	10	2	-
	P22-VP-11	VP-11	08/13/2015	5.0	9000	2	ND	ND	ND	ND	2	-	ND	ND	**180**	-	20	3	ND	ND	20	4	-
	P22-VP-12	VP-12	08/13/2015	5.0	6200	ND	ND	ND	ND	ND	1	-	ND	2	120	-	5	2	ND	ND	20	4	-
	P23-SV1	SV1	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV2	SV2	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV3	SV3	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV4	SV4	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV5	SV5	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
		SV5 Dup	11/27/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV6	SV6	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV7	SV7	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV8	SV8	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV9	SV9	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV10	SV10	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV11	SV11	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV12	SV12	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-SV13	SV13	11/25/2013	5.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
	P23-Am	Ambient Air	11/27/2013	Ambient	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
8-3	8-3	8-3-5	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-3 Dup	05/16/2017	5.0	-	22	ND	ND	ND	ND	ND	-	ND	ND	2000	-	20	81	60	ND	27	11	-
Screening Level for Keeping Soil on Site (OEHHA [a])					-	36	25	50	16,000	32,000	420	45	4,000	32	180	0.21	140,000	990,000	530	13	320,000	320,000	-
Screening Level for Keeping Soil on Site (OEHHA [b])					-	120	85	170	44,000	89,000	1,400	130	13,000	110	600	0.58	380,000	2,800,000	1,800	45	890,000	880,000	-

Notes:

bold - Value detected above a trigger/screening value

[a] Office of Environmental Health Hazard Assessment (OEHHA) Residential Scenario's Soil-Gas-Screening Numbers for Nonvolatile Chemicals below Buildings Constructed without Engineered Fill below Sub-slab Gravel

[b] Office of Environmental Health Hazard Assessment (OEHHA) Commerical/Industrial Scenario's Soil-Gas-Screening Numbers for Nonvolatile Chemicals below Buildings Constructed without Engineered Fill below Sub-slab Gravel

µg/m³ - microgram per cubic meter

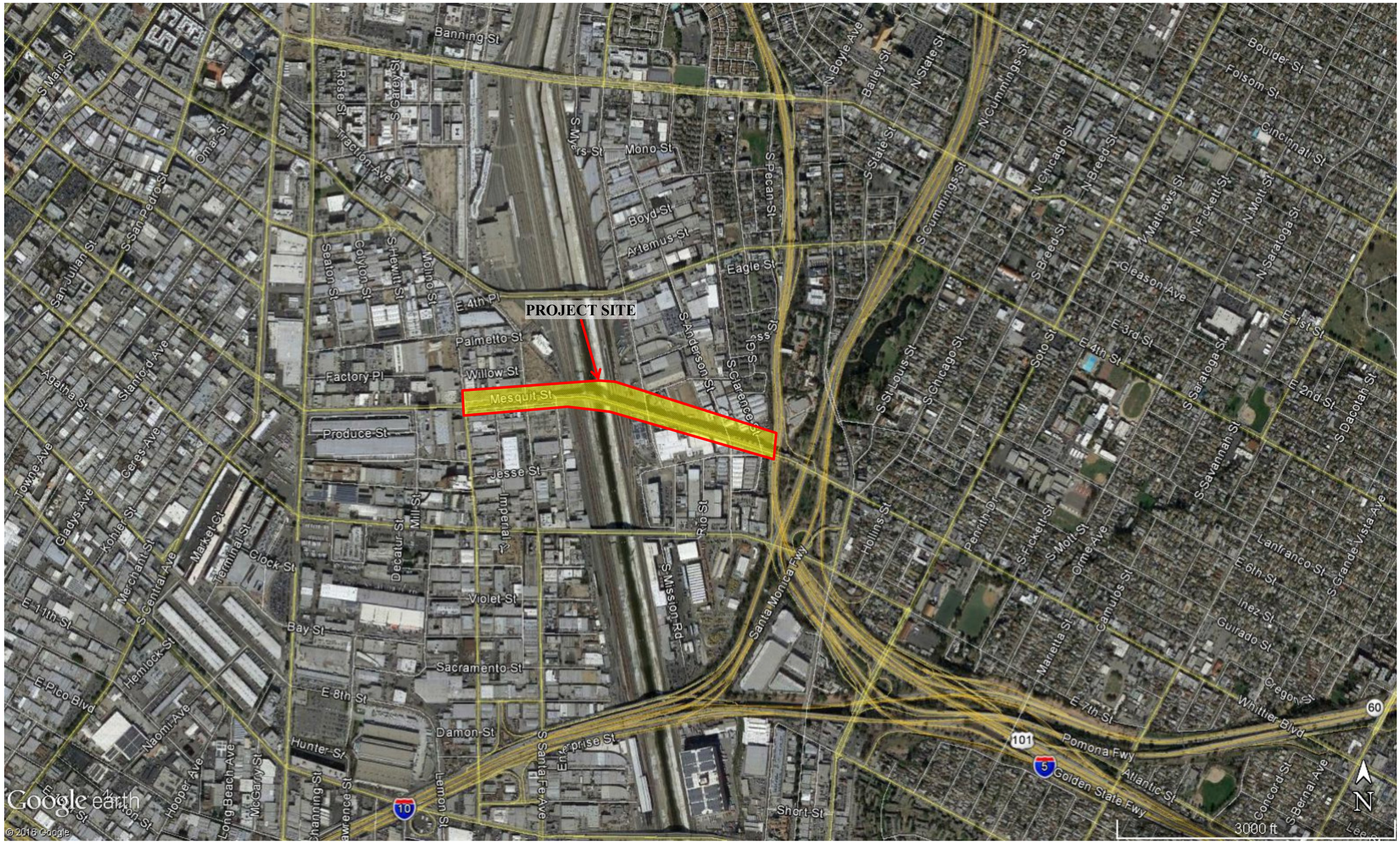
ND - Not Detected (below Reporting Limit)

NE - Not Established

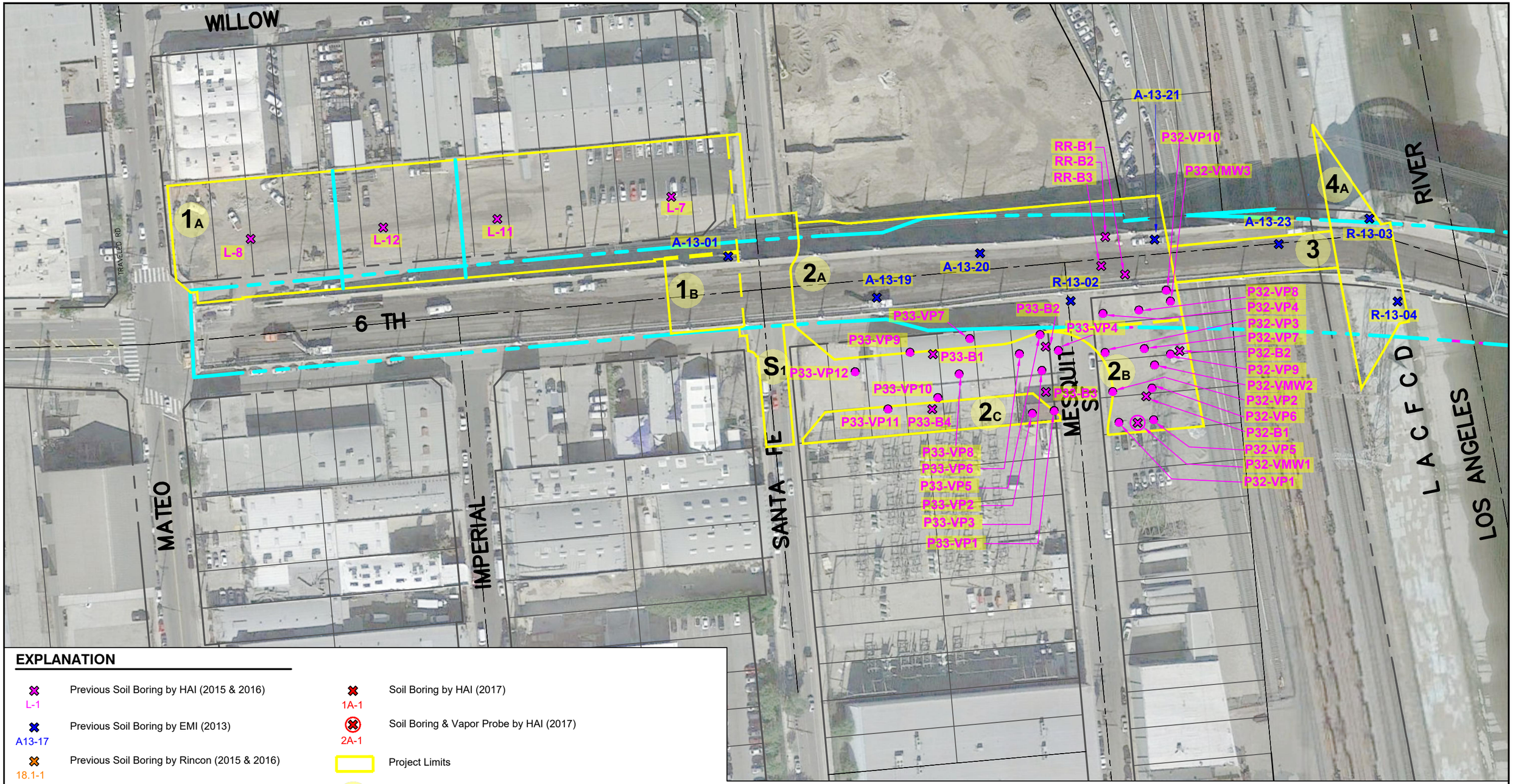
Concentrations between Residential & Commercial/Industrial Screening Levels

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

FIGURES



HUSHMAND ASSOCIATES, INC. Geotechnical and Earthquake Engineers	**SIXTH STREET VIADUCT PARC IMPROVEMENTS** Los Angeles, California	**SITE VICINITY MAP**	Figure **1**



EXPLANATION

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- 2A-1 — Soil Boring & Vapor Probe by HAI (2017)
- Project Limits
- 1A — PARC Area Designation

0 100 200 FEET
APPROXIMATE SCALE

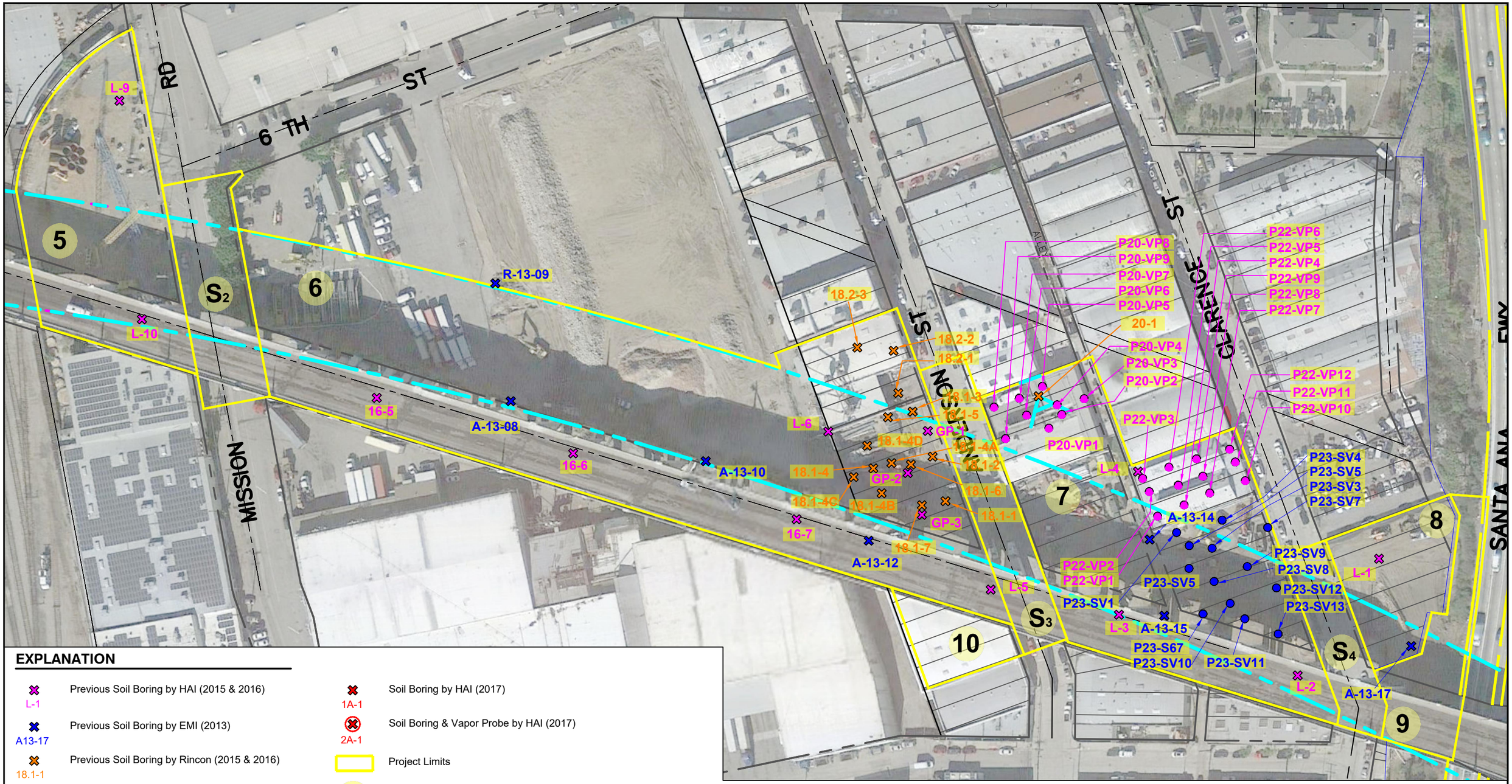
HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California

Project No. LAC-17-001

SOIL BORING & VAPOR PROBE LOCATIONS FROM PREVIOUS INVESTIGATIONS - WEST PARK

Figure **2a**



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- Project Limits
- 1A — PARC Area Designation

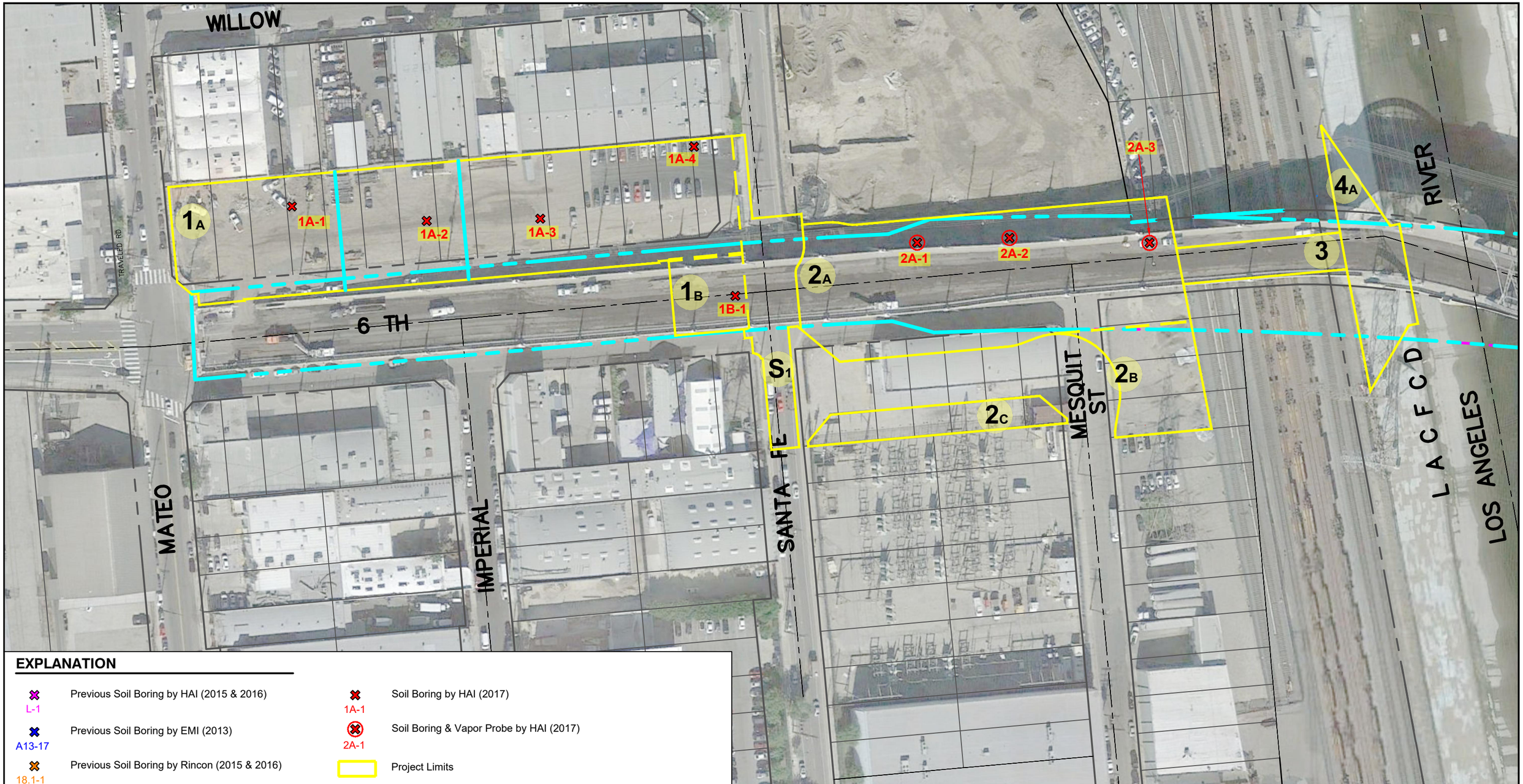
0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

SOIL BORING & VAPOR PROBE LOCATIONS FROM PREVIOUS INVESTIGATIONS - EAST PARK

Figure **2b**



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0 100 200 FEET
APPROXIMATE SCALE

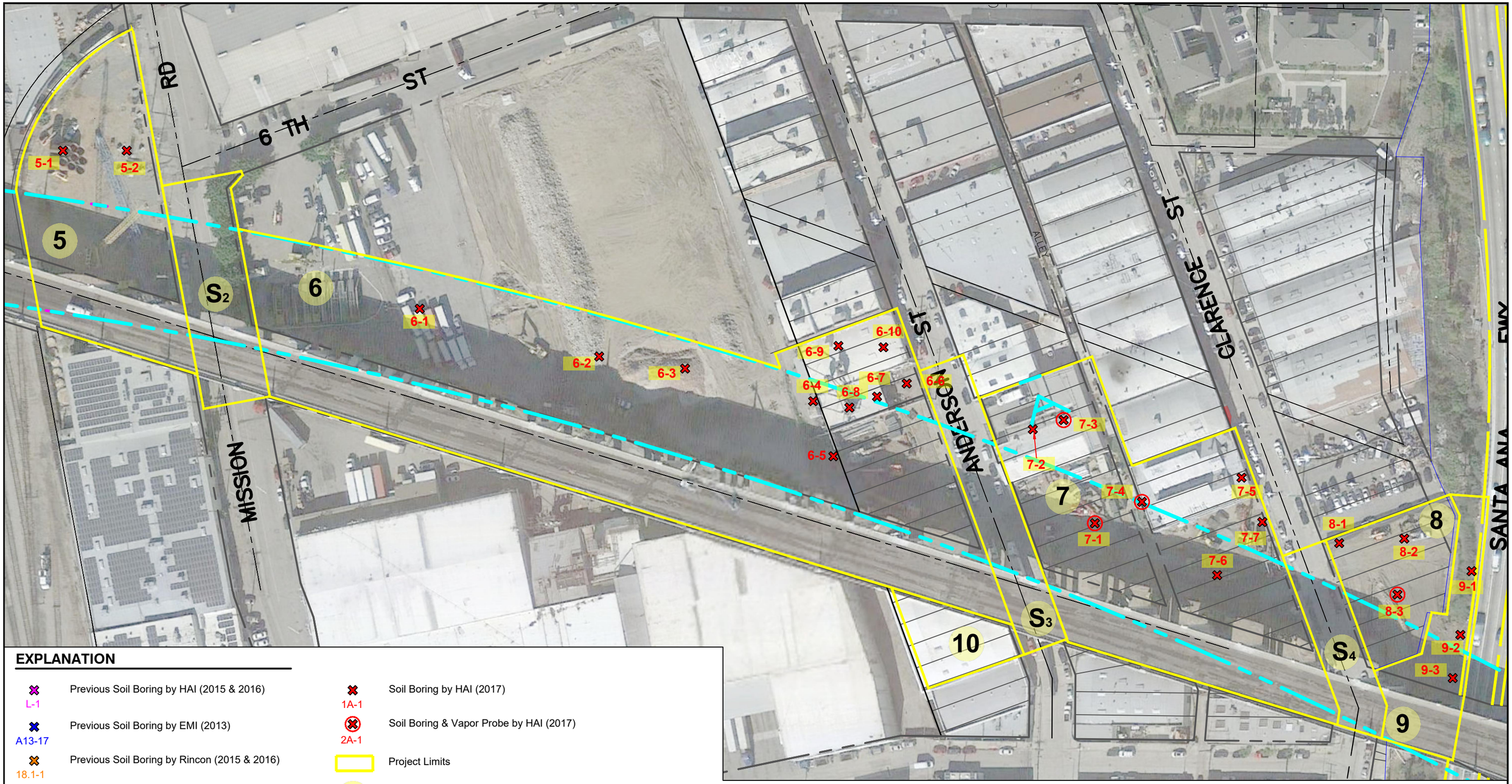
HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California

Project No. LAC-17-001

SOIL BORING & VAPOR PROBE LOCATIONS FROM CURRENT INVESTIGATION - WEST PARK

Figure **3a**



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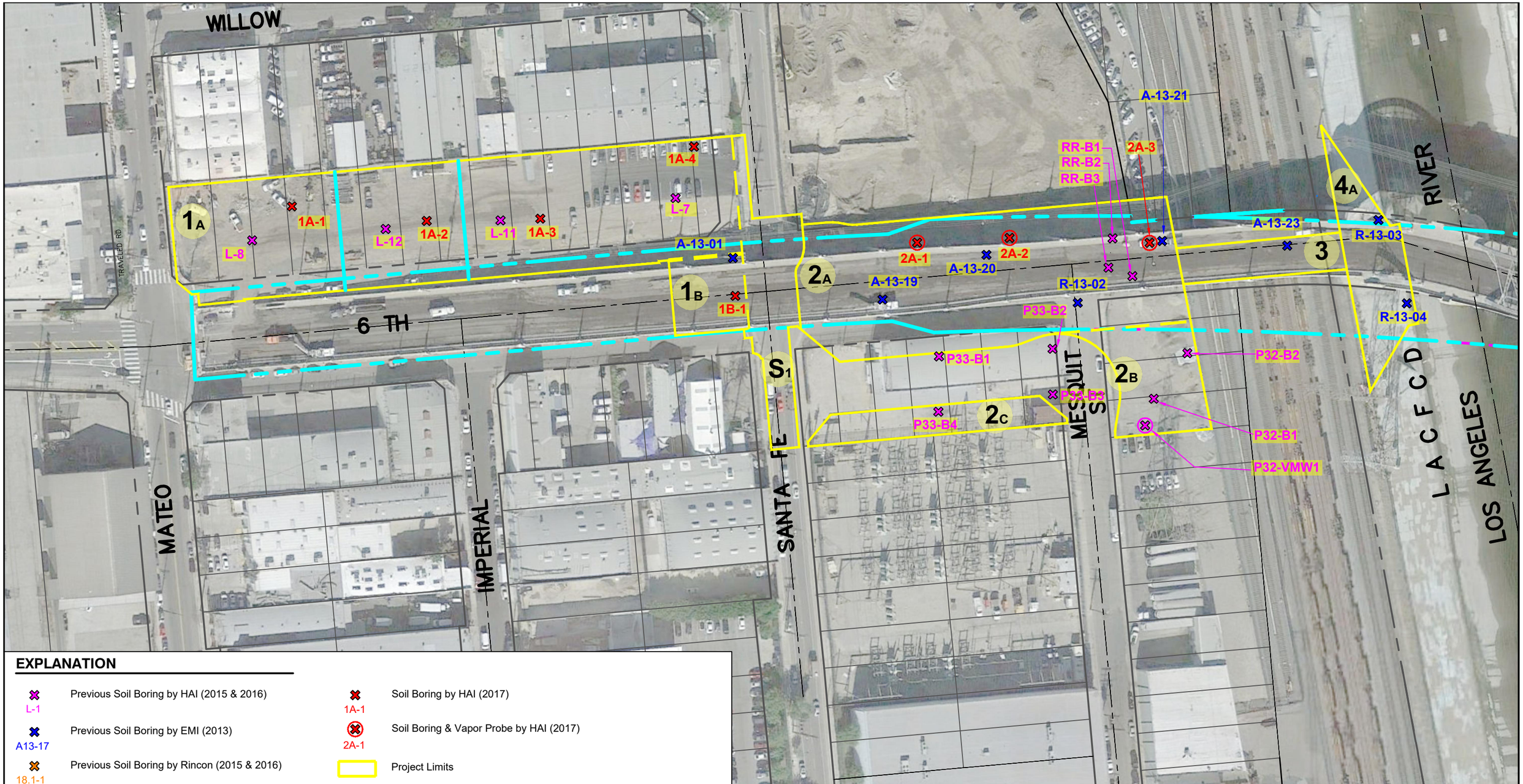
0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

SOIL BORING & VAPOR PROBE LOCATIONS FROM CURRENT INVESTIGATION - EAST PARK

Figure **3b**



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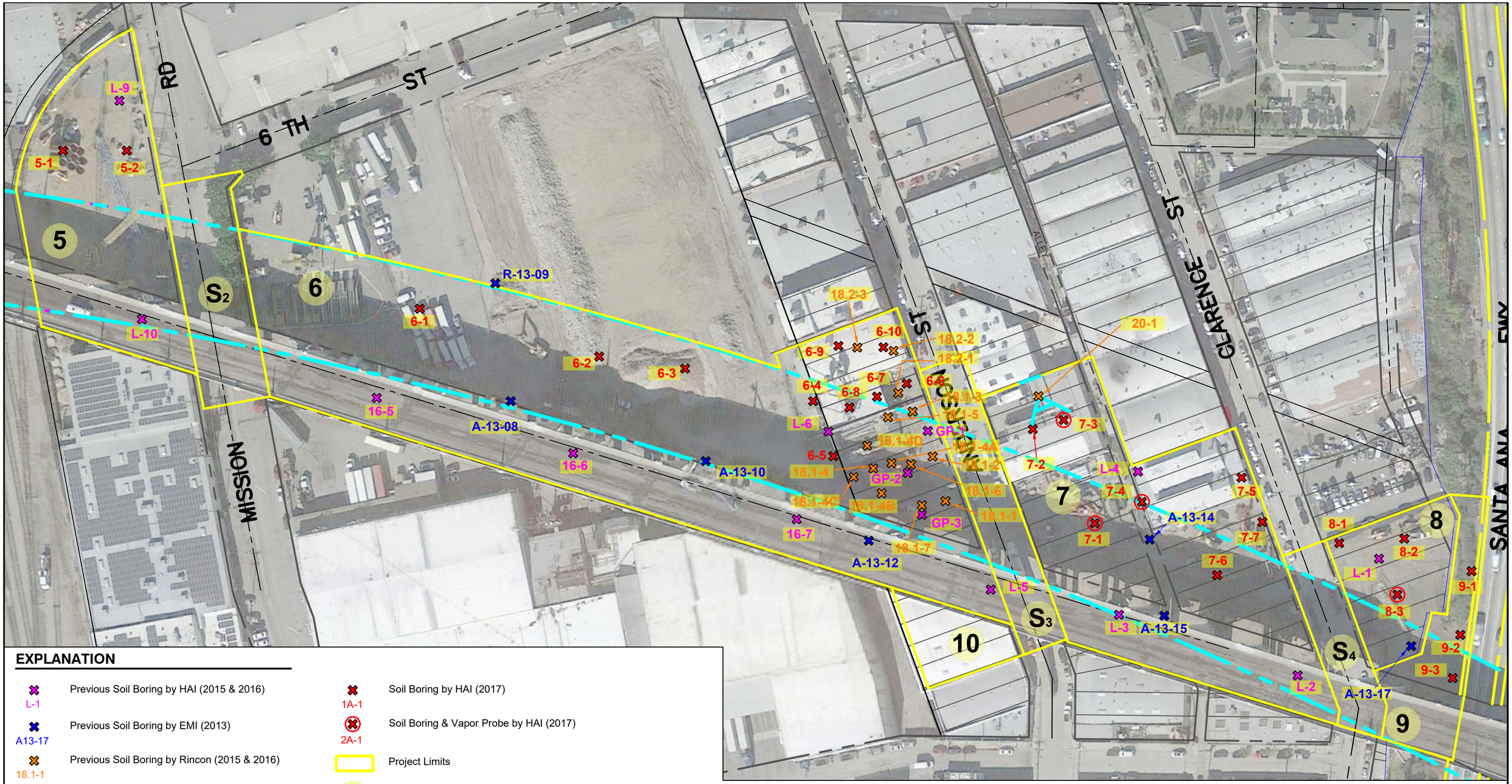
0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

SOIL BORING LOCATIONS FROM ALL INVESTIGATIONS - WEST PARK

Figure 4a



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- Project Limits
- 1A — PARC Area Designation

0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
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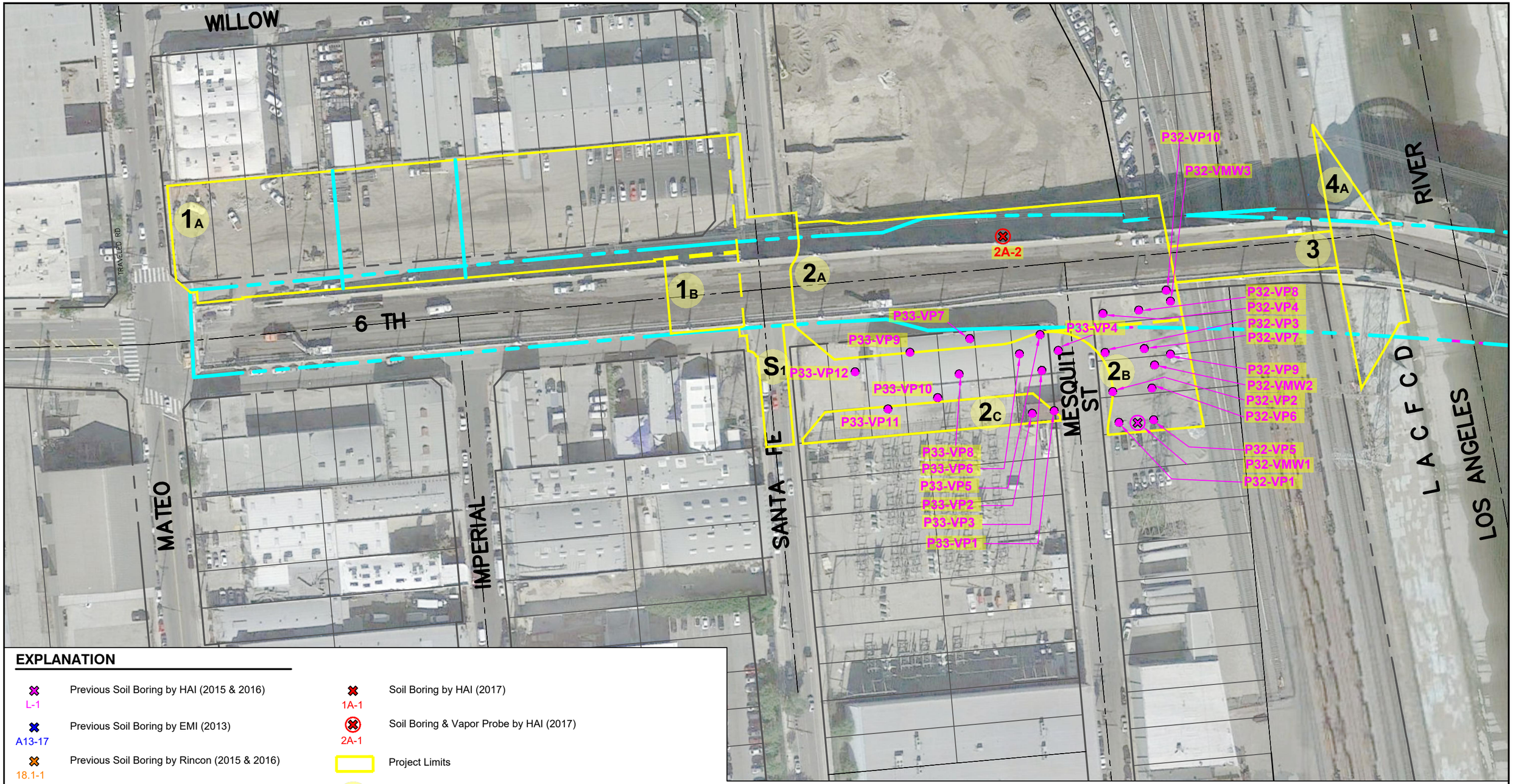
SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

SOIL BORING LOCATIONS FROM ALL INVESTIGATIONS - EAST PARK

Figure **4b**



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- Project Limits
- 1A — PARC Area Designation

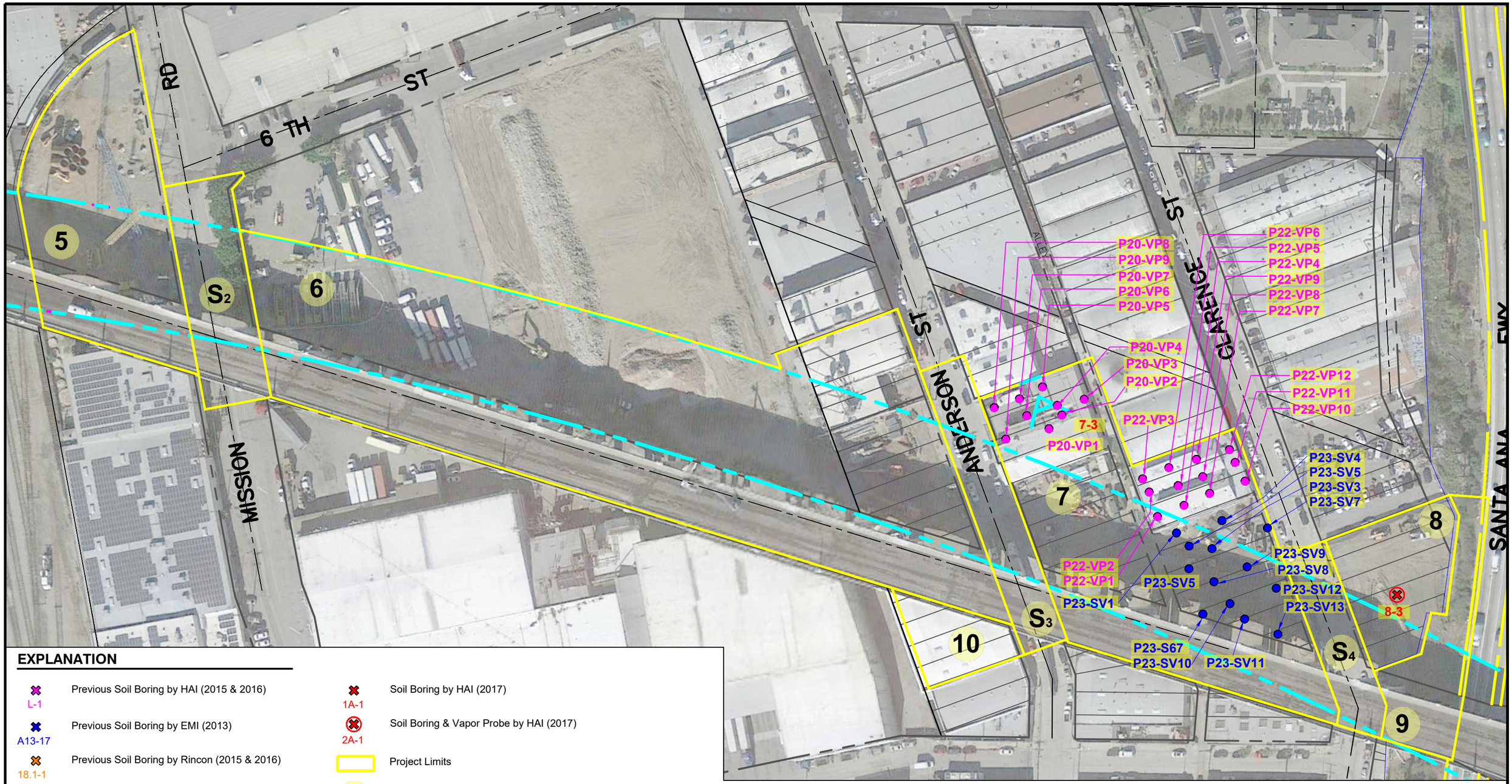
0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

SOIL VAPOR PROBE LOCATIONS FROM ALL INVESTIGATIONS - WEST PARK

Figure **5a**



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- 2A-1 — Soil Boring & Vapor Probe by HAI (2017)
- Project Limits
- 1A — PARC Area Designation

0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

SOIL VAPOR PROBE LOCATIONS FROM ALL INVESTIGATIONS - EAST PARK

Figure **5b**

EXPLANATION

Met□□ne Z□ne

Met□□ne B□□er Z□ne

Pr□e□t Li□it□

0 100 200 FEET

APPROXIMATE SCALE

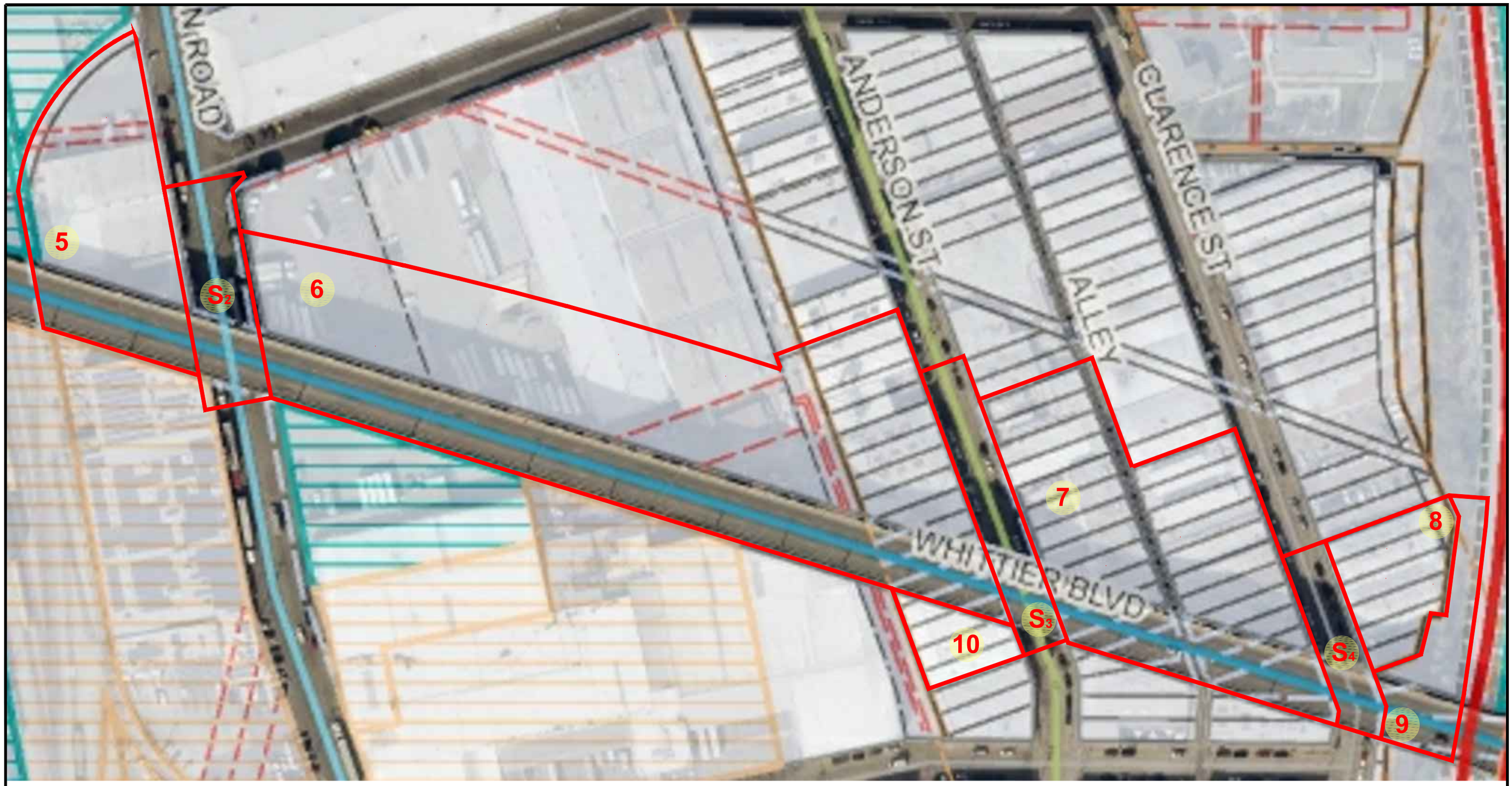
HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California

Project No. LAC-17-001

METHANE & METHANE BUFFER ZONES - WEST PARK

Figure **6a**



EXPLANATION

- Met□□ne Z□ne
- Met□□ne B□□er Z□ne
- Pr□e□t Li□it□

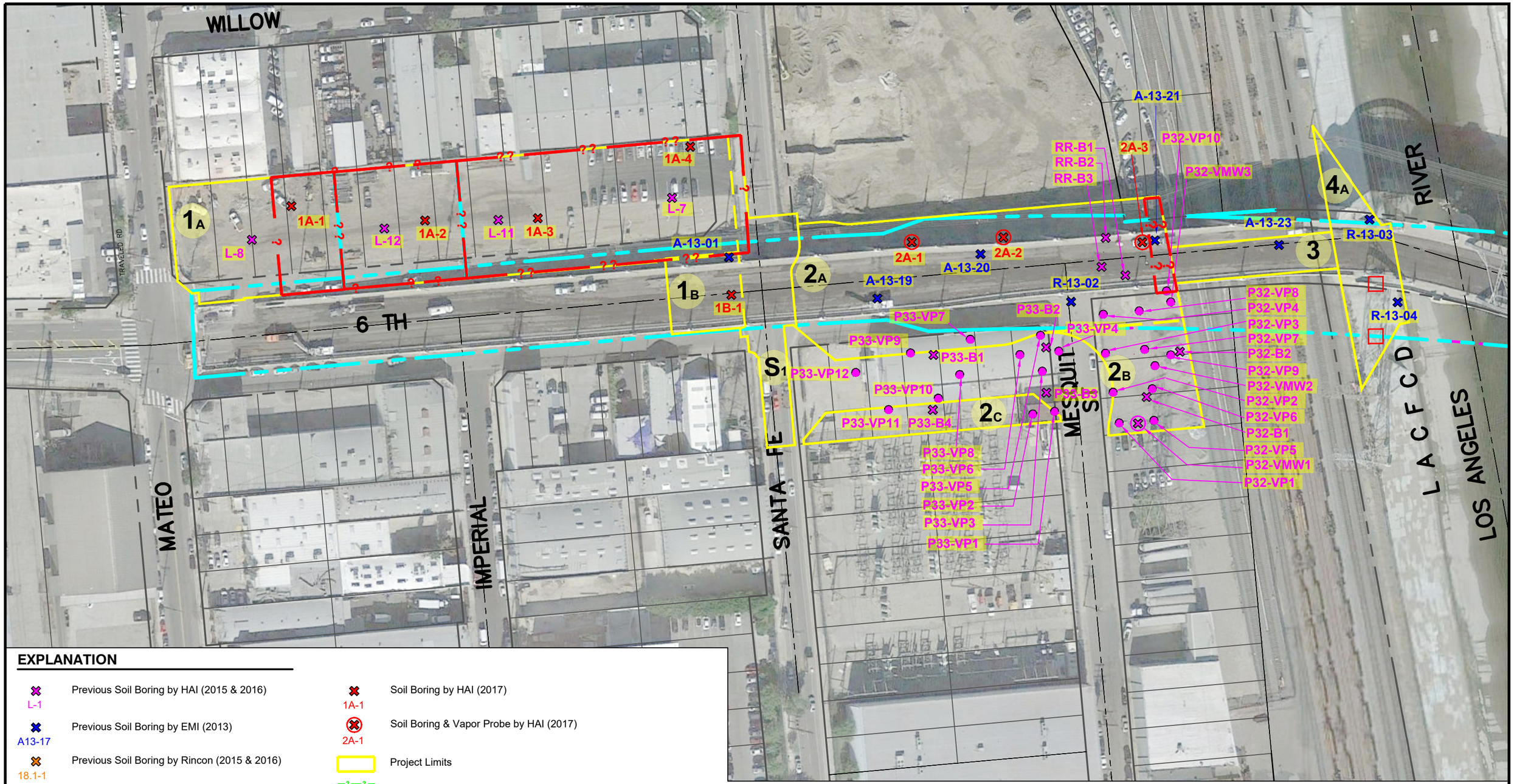
0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

METHANE & METHANE BUFFER ZONES - EAST PARK

Figure **6b**



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- 1A-1 — Soil Boring by HAI (2017)
- 2A-1 — Soil Boring & Vapor Probe by HAI (2017)
- Project Limits
- Category 1a: RCRA Hazardous Zone
- Category 2a: Non-RCRA Hazardous Zone
- Category 2b: Soil Gas & Non-RCRA Hazardous Zone
- Category 3: Soil Gas Only Zone
- Aerially Deposited Lead Zone
- 1A — PARC Area Designation

0 100 200 FEET
APPROXIMATE SCALE

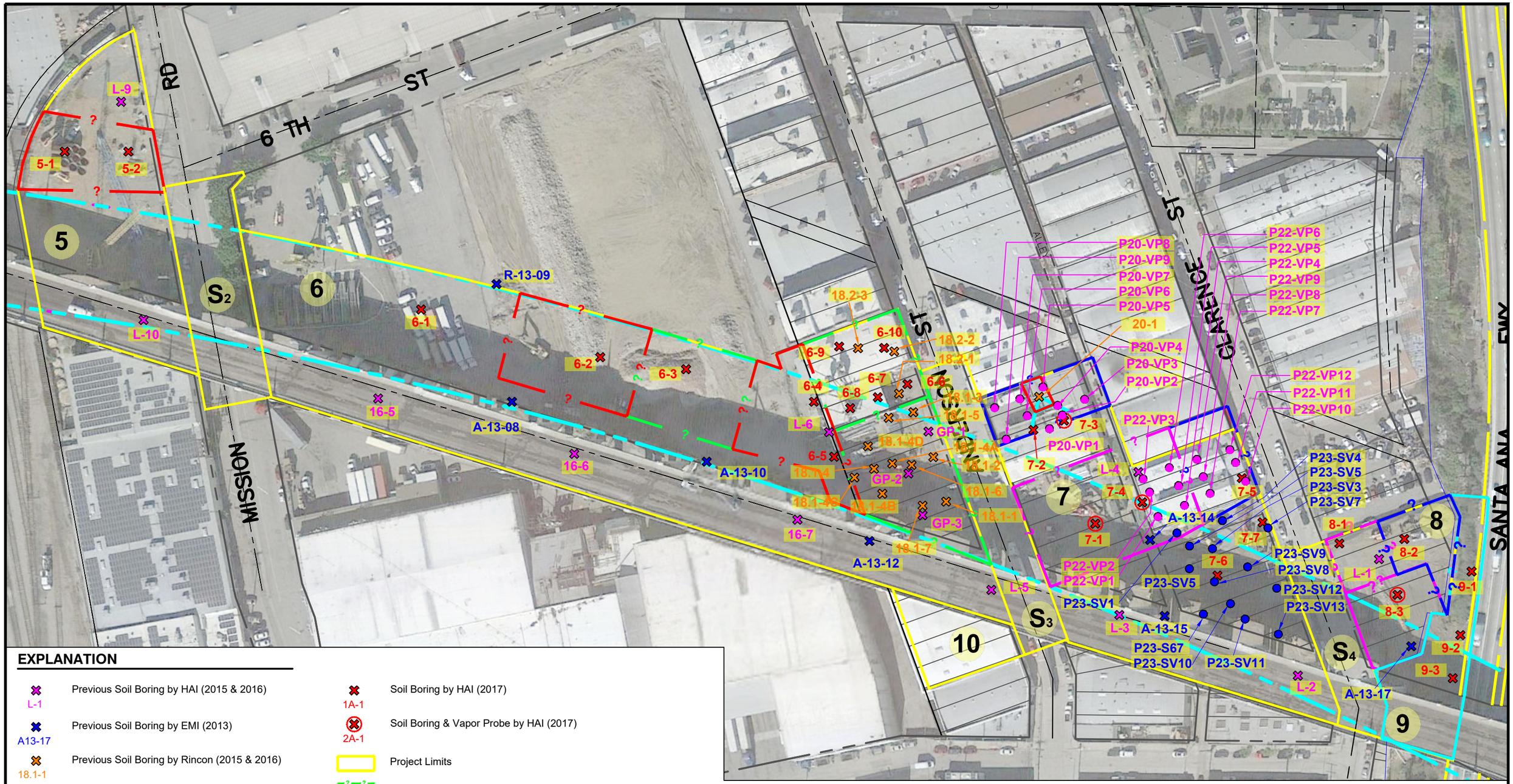
HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California

Project No. LAC-17-001

CONTAMINATION CATEGORIES WITH SOIL BORINGS AND VAPOR PROBES - WEST PARK

Figure **7a**



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- P23-SV13 — Previous Vapor Probe by EMI (2014)
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- 1A-1 — Soil Boring by HAI (2017)
- 2A-1 — Soil Boring & Vapor Probe by HAI (2017)
- Project Limits
- Category 1a: RCRA Hazardous Zone
- Category 2a: Non-RCRA Hazardous Zone
- Category 2b: Soil Gas & Non-RCRA Hazardous Zone
- Category 3: Soil Gas Only Zone
- Aerially Deposited Lead Zone
- 1A — PARC Area Designation

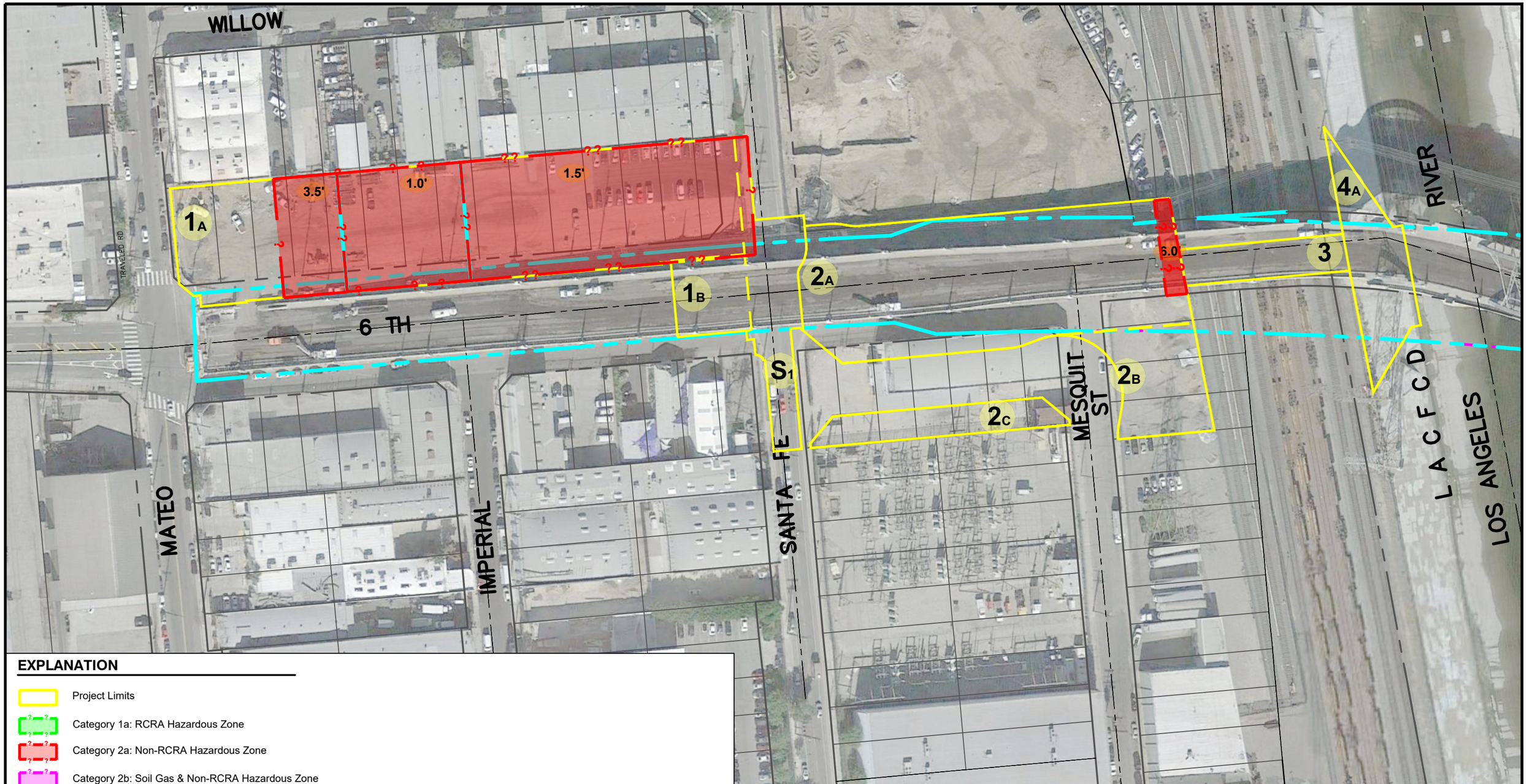
0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

CONTAMINATION CATEGORIES WITH SOIL BORINGS AND VAPOR PROBES - EAST PARK

Figure **7b**



EXPLANATION

- Project Limits
- Category 1a: RCRA Hazardous Zone
- Category 2a: Non-RCRA Hazardous Zone
- Category 2b: Soil Gas & Non-RCRA Hazardous Zone
- Category 3: Soil Gas Only Zone
- Aerially Deposited Lead Zone
- 1A PARC Area Designation
- 0.75' Estimated Soil Removal Depth

0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

AREAS OF CONCERN WITH CONTAMINATION - WEST PARK

Figure **8a**

EXPLANATION

- Project Limits
- Category 1a: RCRA Hazardous Zone
- Category 2a: Non-RCRA Hazardous Zone
- Category 2b: Soil Gas & Non-RCRA Hazardous Zone
- Category 3: Soil Gas Only Zone
- Aerially Deposited Lead Zone
- 1A PARC Area Designation
- 0.75' Estimated Soil Removal Depth

0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

AREAS OF CONCERN WITH CONTAMINATION - EAST PARK

Figure **8b**

APPENDIX A
FIELD INFORMATION

SITE SAFETY MEETING LOGS

DRAFT

SITE-SPECIFIC HEALTH & SAFETY ACKNOWLEDGEMENT FORM

I have read the Site-Specific Health & Safety Plan and understand the hazards, precautions required, and responsibilities involved in working at this site.

NAME	SIGNATURE	DATE
Dan Terres		5-15-17
Sean Burford		5-15-17
Rudy Betancourt		5-15-17
Garrett Metzger		5-15-17

DRAFT

Job No. LAC17-001

Boring(s) No. multiple

Page 1 of 1

DAILY MEETING LOG

Project Name: 6th St. Bridge Date: 5-15-17

Field Representative(s): Don Terres, Sean

Work Site Location: 6th st Bridge Sections 1-9

Physical Hazards: related to Geoprobe operations, Trip Hazards

Chemical Hazards: Low concentration VOCs, lead & heavy metal Concentrations, TpH

Safety Equipment on Site:

Personal Protection Levels and Specific Equipment: Boots, glasses, Hard Hat, Safety Vests.

Nearest Medical Facility: USC medical Center

First Aid Location: multiple by Stanstec

Fire Suppression Device: on Rig

Spill Kit: on Rig

Emergency Phone Numbers: 911

Emergency Evacuation Route: 7th & 4th to state street Left To USC Med.

The above hazards and controls have been adequately explained to me.

Name	Company	Signature
Rudy Betancourt	KTE	
Garrett Metzger	KTE	
Sean Burford	HAI	

Site Safety Officer: Don Torres

Project Manager: Naresh

Checked By:

Date: 5-15-17

DRAFT

Job No. 17-001 LAC

Boring(s) No. Multiple

Page 1 of 1

DAILY MEETING LOG

Project Name: 6th st Bridge Date: 5-16-17

Field Representative(s): Don Terres

Work Site Location: 6th st. Bridge

Physical Hazards: Drill Rig, Trip,

Chemical Hazards: VOC's low level, Lead & Metals

Safety Equipment on Site:

Personal Protection Levels and Specific Equipment: Boots, Hard Hat, glasses, gloves Safety Vests

Nearest Medical Facility: USC Med. Center

First Aid Location: Multiple - Drill Rig - Car.

Fire Suppression Device: Drill Rig.

Spill Kit:

Emergency Phone Numbers: 911

Emergency Evacuation Route: 7th or 4th, to Soto - Multiply

The above hazards and controls have been adequately explained to me.

Name	Company	Signature
Rudy Betancourt	KTE	
Sean Burford	HAI	
Garrett Metzger	KTE	

Site Safety Officer: Don Terres

Project Manager:

Checked By:

Date:

FIELD MONITORING LOGS

Project Name: City of Los Angeles - Sixth Street PARC Improvements

Project No.: LAC-17-001

Logged by: Don Terres & Sean Burford

Equipment Used: PID

Boring ID	Sample ID	Sample Depth (ft. below grade)	Date	Time	VOC (ppm)	Notes
1A-1	1A-1	0.5	05/15/2017	7:28 AM	0.0	
	1A-1-1.0	1.0	05/15/2017	7:28 AM	0.0	
	1A-1-3.0	3.0	05/15/2017	7:32 AM	0.0	
	1A-1-5.0	5.0	05/15/2017	7:32 AM	0.0	
1A-2	1A-2-0.5	0.5	05/15/2017	7:47 AM	0.0	
	1A-2-1.0	1.0	05/15/2017	7:47 AM	0.0	
	1A-2-3.0	3.0	05/15/2017	7:52 AM	0.0	
	1A-2-5.0	5.0	05/15/2017	7:52 AM	0.0	
1A-3	1A-3-0.5	0.5	05/15/2017	8:00 AM	0.0	
	1A-3-1.0	1.0	05/15/2017	8:00 AM	0.0	
	1A-3-3.0	3.0	05/15/2017	8:02 AM	0.0	
	1A-3-5.0	5.0	05/15/2017	8:02 AM	0.0	
1A-4	1A-4-0.5	0.5	05/15/2017	8:15 AM	0.0	
	1A-4-1.0	1.0	05/15/2017	8:15 AM	0.0	
	1A-4-3.0	3.0	05/15/2017	8:19 AM	0.0	
	1A-4-5.0	5.0	05/15/2017	8:19 AM	0.0	
1B-1	1B-1-0.5	0.5	05/15/2017	8:32 AM	0.0	
	1B-1-1.0	1.0	05/15/2017	8:32 AM	0.0	
	1B-1-3.0	3.0	05/15/2017	8:37 AM	0.0	
	1B-1-5.0	5.0	05/15/2017	8:37 AM	0.0	
2A-1	2A-1-0.5	0.5	05/15/2017	2:08 PM	0.0	
	2A-1-1.0	1.0	05/15/2017	2:08 PM	0.3	
	2A-1-3.0	3.0	05/15/2017	2:13 PM	0.1	
	2A-1-5.0	5.0	05/15/2017	2:13 PM	0.0	
2A-2	2A-2-0.5	0.5	05/15/2017	2:34 PM	0.2	
	2A-2-1.0	1.0	05/15/2017	2:34 PM	0.8	
	2A-2-3.0	3.0	05/15/2017	2:38 PM	0.1	
	2A-2-5.0	5.0	05/15/2017	2:38 PM	0.1	
5-1	5-1-0.5	0.5	05/15/2017	9:47 AM	0.0	
	5-1-1.0	1.0	05/15/2017	9:47 AM	0.0	
	5-1-2.0	2.0	05/15/2017	9:47 AM	0.0	
	5-1-3.0	3.0	05/15/2017	9:47 AM	0.0	
5-2	5-2-0.5	0.5	05/15/2017	9:55 AM	0.0	
	5-2-1.0	1.0	05/15/2017	9:55 AM	0.0	
	5-2-2.0	2.0	05/15/2017	9:55 AM	0.0	
	5-2-3.0	3.0	05/15/2017	9:55 AM	0.0	
6-1	6-1-0.5	0.5	05/15/2017	10:07 AM	0.0	
	6-1-1.0	1.0	05/15/2017	10:07 AM	0.0	
	6-1-3.0	3.0	05/15/2017	10:25 AM	0.0	
	6-1-5.0	5.0	05/15/2017	10:25 AM	0.0	
6-2	6-2-0.5	0.5	05/16/2017	7:17 AM	0.0	
	6-2-1.0	1.0	05/16/2017	7:17 AM	0.0	
	6-2-3.0	3.0	05/16/2017	7:19 AM	0.0	
	6-2-5.0	5.0	05/16/2017	7:19 AM	0.0	

Project Name: City of Los Angeles - Sixth Street PARC Improvements

Project No.: LAC-17-001

Logged by: Don Terres & Sean Burford

Equipment Used: PID

Boring ID	Sample ID	Sample Depth (ft. below grade)	Date	Time	VOC (ppm)	Notes
6-3	6-3-0.5	0.5	05/15/2017	10:35 AM	0.0	
	6-3-1.0	1.0	05/15/2017	10:35 AM	0.0	
	6-3-3.0	3.0	05/15/2017	10:38 AM	0.0	
	6-3-5.0	5.0	05/15/2017	10:38 AM	0.0	
6-4	6-4-0.5	0.5	05/15/2017	12:07 PM	0.0	
	6-4-1.0	1.0	05/15/2017	12:07 PM	0.0	
	6-4-3.0	3.0	05/15/2017	12:24 PM	0.0	
	6-4-5.0	5.0	05/15/2017	12:24 PM	0.0	
6-5	6-5-0.5	0.5	05/15/2017	12:30 PM	0.0	
	6-5-1.0	1.0	05/15/2017	12:30 PM	0.0	
	6-5-3.0	3.0	05/15/2017	12:33 PM	0.0	
	6-5-5.0	5.0	05/15/2017	12:33 PM	0.0	
6-6	6-6-1.0	1.0	05/15/2017	11:12 AM	0.0	
	6-6-3.0	3.0	05/15/2017	11:12 AM	0.0	
	6-6-5.0	5.0	05/15/2017	11:12 AM	0.0	
	6-6-7.5	7.5	05/15/2017	11:12 AM	0.0	
6-7	6-7-1.0	1.0	05/15/2017	11:19 AM	0.0	
	6-7-3.0	3.0	05/15/2017	11:19 AM	0.0	
	6-7-5.0	5.0	05/15/2017	11:22 AM	0.0	
	6-7-7.5	7.5	05/15/2017	11:22 AM	0.0	
6-8	6-8-1.0	1.0	05/15/2017	11:29 AM	0.0	
	6-8-3.0	3.0	05/15/2017	11:29 AM	0.0	
	6-8-5.0	5.0	05/15/2017	11:33 AM	0.0	
	6-8-7.5	7.5	05/15/2017	11:33 AM	0.0	
6-9	6-9-1.0	1.0	05/15/2017	10:58 AM	0.0	
	6-9-3.0	3.0	05/15/2017	10:58 AM	0.0	
	6-9-5.0	5.0	05/15/2017	11:00 AM	0.0	
	6-9-7.5	7.5	05/15/2017	11:00 AM	0.0	
6-10	6-10-1.0	1.0	05/15/2017	10:48 AM	0.0	
	6-10-3.0	3.0	05/15/2017	10:48 AM	0.0	
	6-10-5.0	5.0	05/15/2017	10:52 AM	0.0	
	6-10-7.5	7.5	05/15/2017	10:52 AM	0.0	
7-1	7-1-0.5	0.5	05/16/2017	7:42 AM	0.0	
	7-1-1.0	1.0	05/16/2017	7:42 AM	0.0	Could not obtain soil samples at 3 ft. bgs and below due to hard soil conditions. Tried three times to sample but unsuccessful.
7-2	7-2-0.5	0.5	05/15/2017	1:45 PM	0.0	
	7-2-1.0	1.0	05/15/2017	1:45 PM	0.0	
	7-2-3.0	3.0	05/15/2017	1:48 PM	0.0	
	7-2-5.0	5.0	05/15/2017	1:48 PM	0.0	
7-3	7-3-0.5	0.5	05/15/2017	1:35 PM	0.0	
	7-3-1.0	1.0	05/15/2017	1:35 PM	0.0	
	7-3-3.0	3.0	05/15/2017	1:38 PM	0.0	
	7-3-5.0	5.0	05/15/2017	1:38 PM	0.0	

Project Name: City of Los Angeles - Sixth Street PARC Improvements

Project No.: LAC-17-001

Logged by: Don Terres & Sean Burford

Equipment Used: PID

Boring ID	Sample ID	Sample Depth (ft. below grade)	Date	Time	VOC (ppm)	Notes
7-4	7-4-0.5	0.5	05/15/2017	1:13 PM	0.0	
	7-4-1.0	1.0	05/15/2017	1:13 PM	0.0	
	7-4-3.0	3.0	05/15/2017	1:15 PM	0.0	
	7-4-5.0	5.0	05/15/2017	1:15 PM	0.0	
7-5	7-5-0.5	0.5	05/16/2017	8:11 AM	0.0	
	7-5-1.0	1.0	05/16/2017	8:11 AM	0.0	
	7-5-3.0	3.0	05/16/2017	8:13 AM	0.0	
	7-5-5.0	5.0	05/16/2017	8:13 AM	0.0	
7-6	7-6-0.5	0.5	05/16/2017	8:34 AM	0.1	
	7-6-1.0	1.0	05/16/2017	8:34 AM	0.1	
	7-6-3.0	3.0	05/16/2017	8:36 AM	0.0	
	7-6-5.0	5.0	05/16/2017	8:36 AM	0.1	
7-7	7-7-0.5	0.5	05/16/2017	8:23 AM	0.0	
	7-7-1.0	1.0	05/16/2017	8:23 AM	0.0	
	7-7-3.0	3.0	05/16/2017	8:25 AM	0.1	
	7-7-5.0	5.0	05/16/2017	8:25 AM	0.1	
8-1	8-1-0.5	0.5	05/16/2017	9:17 AM	0.1	
	8-1-1.0	1.0	05/16/2017	9:17 AM	0.1	
	8-1-3.0	3.0	05/16/2017	9:20 AM	0.1	
	8-1-5.0	5.0	05/16/2017	9:20 AM	0.0	
8-2	8-2-0.5	0.5	05/16/2017	9:08 AM	0.0	
	8-2-1.0	1.0	05/16/2017	9:08 AM	0.0	
	8-2-3.0	3.0	05/16/2017	9:11 AM	0.0	
	8-2-5.0	5.0	05/16/2017	9:11 AM	0.0	
8-3	8-3-0.5	0.5	05/16/2017	8:52 AM	0.0	
	8-3-1.0	1.0	05/16/2017	8:52 AM	0.1	
	8-3-3.0	3.0	05/16/2017	8:55 AM	0.0	
	8-3-5.0	5.0	05/16/2017	8:55 AM	0.1	
9-1	9-1-0.5	0.5	05/17/2017	6:57 AM	0.0	
	9-1-1.0	1.0	05/17/2017	6:59 AM	0.0	
	9-1-3.0	3.0	05/17/2017	7:06 AM	0.0	
	9-1-5.0	5.0	05/17/2017	7:10 AM	0.0	
9-2	9-2-0.5	0.5	05/17/2017	7:25 AM	0.0	
	9-2-1.0	1.0	05/17/2017	7:28 AM	0.0	Refusal at 1.2 feet due to a concrete slab extending several foot.
9-3	9-3-0.5	0.5	05/17/2017	7:33 AM	0.0	
	9-3-1.0	1.0	05/17/2017	7:35 AM	0.0	
	9-3-3.0	3.0	05/17/2017	7:45 AM	0.0	
	9-3-5.0	5.0	05/17/2017	7:55 AM	0.0	

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

CHAIN OF CUSTODY FORMS

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20170715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other:	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☑
	3. CONTAINER INTACT	☑	☐	7. COOLER TEMP, deg C	6.2, 5.1	
	4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand & Assoc HAI
Address: 250 GODDARD
City: IRVINE State: CA Zip: 92618
Tel: (949) 777-1266 Fax: (949) 777-1276

SEND REPORT TO:
Attn: Naresh Bellana Email: naresh@haieng.com
Company: HAI
Address:
City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: SAME Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: 6th St. Bridge
Project No.: LAC-17-001
Sampler: DAT
Quote No: E17ES1
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type	Container: Material	Container: Preservative	QA/QC	REMARKS
1	1703036-1	1A-1 - 0.5	5-15	7:28							X							5	1	1	2	N/A	☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	
2	-2	1A-1 - 1.0		7:28							X								1	1				
3	-3	1A-1 - 3.0		7:32							X								1	1				
4	-4	1A-1 - 5.0		7:32							X								1	1				
5	-5	1A-2 - 0.5		7:47							X								1	1				
6	-6	1A-2 - 1.0		7:47							X								1	1				
7	-7	1A-2 - 3.0		7:52							X								1	1				
8	-8	1A-2 - 5.0		7:52							X								1	1				
9																								
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply.
   TAT = 0 : 100% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, or as directed.
7. Samples will be disposed of after 14 calendar days after receipt of samples.
8. Electronic records maintained for five (5) years from report date.
9. Hard copy reports will be disposed of after 45 calendar days from report date.
10. Storage and Report Fees:
    - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples. $2/sample/month if extended storage or hold is requested.
    - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples. $20/sample/week if extended storage is requested.
    - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
11. Rush ECLIPSE/SEC samples: add 2 days to analysis TAT for extraction procedure.
12. Unanalyzed samples will incur a disposal fee of $2 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terms	5-16-17	1:57	[illegible]	5/16/17	1357

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATL COC Ver: 20130715
Method of Transport		Sample Conditions Upon Receipt			
		Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ Fedex ☐ UPS/Par		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
☐ Other		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	TAT	Container: #	Container: Type	Container: Material	Preservative	REMARKS
1	1702036 - 9	1A-3 - 0.5	5-15	8:00	5	1	1	2	W	
2	- 10	1A-3 - 1.0		8:00						
3	- 11	1A-3 - 3.0		8:02						
4	- 12	1A-3 - 5.0		8:02						
5										
6	- 13	1A-4 - 0.5		8:15						
7	- 14	1A-4 - 1.0		8:15						
8	- 15	1A-4 - 3.0		8:19						
9	- 16	1A-4 - 5.0		8:19						
10										

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

Container Material: 1=Glass; 2=Plastic; 3=Metal
Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=NaOH; 5=Zn(Ac)2 & NaOH; 6=MeOH; 7=NH4Cl; 8=Other

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract fee — ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $12.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush PCBP/SPLP samples: add 2 days to analysis TAT for extraction or procedure.
11. Unarchived samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Don Torres	5-16-17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 3 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLLOC Ver: 20150715

Method of Transport		Sample Conditions Upon Receipt					
		Condition	Y	N	Condition	Y	N
☑ Client	☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx	☐ Dectra	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:		Tel:
	City:	State:	Zip: Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED / OIL

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	[illegible]	[illegible]	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	8081 (PESTICIDES)	8082 (PCBs)	TAT	Container: #	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Liter, Amber; 6=Jar; 7=Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=NaOH; 5=Zn(Ac)2; 6=NaOH; 7=NaS2O3	REMARKS
1	1702036-17	1B-1 - 0.5	5-15	8:32							X					5	1	1	2	N/A	
2	-18	1B-1 - 1.0		8:32							X						1	1	2		
3	-19	1B-1 - 3.0		8:37							X						1	1	2		
4	-20	1B-1 - 5.0		8:37							X						1	1	2		
5																					
6	-21	2A-1 - 0.5		2:08					[redacted]		X					5	1	1	2		
7	-22	2A-1 - 1.0		2:08	X	X	X	X	[redacted]		X		X	X	X	5	1	1	2		
8	-23	2A-1 - 3.0		2:13	X	X	X	X	[redacted]		X						1	1	2		
9	-24	2A-1 - 5.0		2:13					[redacted]		X						1	1	2		
10																					

TERMS

1. Sample receiving hours: 7:30 AM to 7:00 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, all samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for thirty-five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $20/ sample/week if extended storage is requested
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformat EDD report, $15 per regenerated EDD.
10. Rush TCLP/STLC samples, add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature] Don Terrel	5-16	1:57	[signature]	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 4 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ FedEx ☐ Contract	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ GSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other:	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:

City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.:
Sampler: | PO #:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERB KUDEX
1	1702936 -25	ZA-2 - 0.5	5-15	2:34							X		
2	-26	ZA-2 - 1.0		2:34	X	X	X	X	X	X	X		X
3	-27	ZA-2 - 3.0		2:38							X		
4	-28	ZA2 - 5.0		2:38	X	X	X	X			X		
5													
6	-29	5-1 - 0.5		9:47							X		
7	-30	5-1 - 1.0		9:47							X		
8	-31	5-1 - 2.0		9:47							X		
9	-32	5-1 - 3.0		9:47							X		
10													

Encircle or Write Requested Analysis

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE | SOLIDS / WIPE / FILTER | WATER - DRINKING / GROUND | WATER - STORM / WASTE | AQUEOUS / LAYERED - OIL

TAT	Container #	Container Type	Container Material	Preservative	QA/QC	REMARKS
5	1	1	2	N/A	☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	
5	1	1	2			
5	1	1	2			
5	1	1	2			
	1	1	2			
	1	1	2			
	1	1	2			
	1	1	2			

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 100% Surcharge SAME BUSINESS DAY if received by 7:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 35% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerate/reformat ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $5/ per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Terry	5/16/17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 5 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715		
Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL ☐ Fedex ☐ OnTrac ☐ GSO ☐ Other	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:		Tel:
	City:	State: Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type*	Container: Material	Preservative	REMARKS
1	1702436-33	5-2-0.5	5-15	9:55							X								5	1	1	2	N/A	
2	-34	5-2-1.0		9:55							X													
3	-35	5-2-2.0		9:55							X													
4	-36	5-2-3.0		9:55							X													
5																								
6	-37	6-1-0.5		10:07							X													
7	-38	6-1-1.0		10:07	X	X	X	X	X	X	X		X											
8	-39	6-1-3.0		10:25							X													
9	-40	6-1-5.0		10:25							X													
10																								

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container

QA/QC
☐ Routine
☐ Caltrans
☐ Legal
☐ RWQCB
☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $2/sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50/00 per regenerated/reformatted report $35 per reprocessed EDD.
10. Rush TCLP/STLC samples - add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Jim DeTerra	5-16-17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 6 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver. 20130715
Method of Transport	Sample Conditions Upon Accept			
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL ☐ Fedex ☐ UPS ☐ GSO ☐ Other	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:		Tel:
	City:	State: Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Type: 1=Tube, 2=VOA, 3=Liter, 4=Pint, 5=Jar, 6=Teflon, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=NaOH, 5=ZnAc2+NaOH, 6=NaAsO2	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	170-20356-41	6-3-0.5	5-15	10:35							X								5	1	1	2	N/A	
2	-42	6-3-1.0		10:35	X	X	X	X	X	X	X		X											
3	-43	6-3-3.0		10:38							X													
4	-44	6-3-5.0		10:38							X													
5																								
6	-45	6-4-0.5		12:07							X													
7	-46	6-4-1.0		12:07	X	X	X	X	X	X	X	X												
8	-47	6-4-3.0		12:24							X													
9	-48	6-4-5.0		12:24							X													
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:30 AM
   - TAT = 1 : 150% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday after hours work - ask for quote.
5. Subcontract TAT = 10 - 15 business days. Projects requiring shorter TAT will incur a surcharge respective to the subcontract lab - - ask for quote.
6. Liquid and solid samples will be disposed of after 15 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report; $35 per reprocessed EDD
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name) Dawn Dow Terrell	Date: 5-16-17	Time: 1:57	Received by: (Signature and Printed Name)	Date: 5/16/17	Time: 1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ FedEx ☐ OnTrac	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ ISSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.:
PO #:
Sampler:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Type: 1-Tube, 2-VOA, 3-Liter, 4-Pint, 5-Jar, 6-Bag, 7-Canister	Material: 1-Glass, 2-Plastic, 3-Metal	Preservative: 1-HCl, 2-HNO3, 3-H2SO4, 4-4°C, 5-Zn(Ac)2 & NaOH, 6-MeOH, 7-NaHSO4	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	170 2036 -49	6-5 - 0.5	5-15	12:30							X								5	1	1	2	N/A	
2	-50	6-5 - 1.0		12:30							X													
3	-51	6.5 - 3.0		12:33	X	X	X	X	X	X	X		X											
4	-52	6-5 - 5.0		12:33							X													
5																								
6	-53	6-6 - 1.0		11:12							X													
7	-54	6-6 - 3.0		11:12							X													
8	-55	6-6 - 5.0		11:12							X													
9	-56	6-6 - 7.5		11:12							X													
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 5:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 100% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge irrespective to the subcontract lab — ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; all samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be discarded after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $10/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report, $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 3 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Torres	5/16/17	1:57	[signature]	5/16/17	1357

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 8 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt				
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. (deg C):		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:		Tel:
	City:	State: Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type: 1-Tube; 2-VOA; 3-Liter; 4-Pint; 5-Jar; 6-Other; 7-Cassette	Container: Material: 1-Glass, 2-Plastic, 3-Metal	Container: Preservative: 1-HCl; 2-HNO3; 3-H2SO4; 4-NaOH; 5-Zn(Ac)2; 6-NaOH+ZnAc/SAPO	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	1702036-57	6-7-1.0	5-15	11:19							X								5	1	1	2		N/A
2	-58	6-7-3.0		11:19							X													
3	-59	6-7-5.0		11:22							X													
4	-60	6-7-7.5		11:22							X													
5																								
6	-61	6-9-1.0		10:58	X						X													
7	-62	6-9-3.0		10:58	X						X													
8	-63	6-9-5.0		11:00							X													
9	-64	6-9-7.5		11:00							X													
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
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5. Subcontract TAT is 10 – 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or holds requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush "CLP/STLC samples: add 7 days to analysis TAT for extraction or procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Tenes	5-16-17	1:57	[illegible]	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 9 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt			
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL ☐ Fedex ☐ On Trac ☐ GSO ☐ Other	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:		SEND INVOICE TO: ☐ same as SEND REPORT TO	
Attn:	Email:	Attn:	Email:
Company:		Company:	
Address:		Address:	
City:	State: Zip:	City:	State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Type: 1-1pint, 2-VOA, 3-Liter, 4-8oz, 5-Jar, 6-Tedlar, 7-Canister	Material: 1-glass, 2-Plastic, 3-Metal	Preservative: 1-HCl, 2-HNO3, 3-H2SO4, 4-NaOH, 5-Zn(Ac)2, 6-MeOH, 7-NaHSO4	REMARKS
1	1702036-05	6-10-1.0	5-15	10:48	X						X								5	1	1	2	MA	
2	-06	6-10-3.0		10:48	X						X													
3	-07	6-10-5.0		10:52							X													
4	-08	6-10-7.5		10:52							X													
5																								
6	-09	7-2-0.5		1:45	X	X	X	X	X	X	X		X											
7	-10	7-2-1.0		1:45							X													
8	-11	7-2-3.0		1:48	X	X	X	X			X													
9	-12	7-2-5.0		1:48							X													
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 200% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.
6. Aqueous and solid samples will be disposed of after 45 calendar days from receipt of samples, or samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples. $2/sample/month of extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples. $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested. $50.00 per regenerated/reformatted report. $35 per reprocessed EDD.
10. Push TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Torres	5-16-17	1:57	FED-EX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 10 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715		
Method of Transport		Sample Conditions Upon Receipt				
		Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C		
☐ Other		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	TAT	Container: #	Container: Type	Container: Material	Preservative	REMARKS
1	1702036-73	T-3 -0.5	5-15	1:35							X			5	1	1	2	MA	
2	-74	T-3- 1.0		1:35	X	X	X	X	X	X	X		X						
3	-75	T-3 - 3.0		1:38							X								
4	-76	T-3 -5.0		1:38	X	X	X	X			X								
5																			
6	-77	T-4 - 0.5		1:13	X	X	X	X	X	X	X		X						
7	-78	T-4 -1.0		1:13							X								
8	-79	T-4-3.0		1:15	X	X	X	X			X								
9	-80	T-4-5.0		1:15							X								
10																			

Encircle or Write Requested Analysis

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

Container: Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=4oz; 6=Brass; 7=Canister. Material: 1=Glass; 2=Plastic; 3=Metal. Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=ZnAc+NaOH; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 200% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of six tubes, $20/ sample/week of extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report, $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Juan Ontiveros	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 11 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATL COC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ FedEx ☐ Courier	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ UPS	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other:	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type	Container: Material	Preservative	REMARKS
1	1703076-11	6-8-~~85~~1.0	5-15	11:29							X								5	1	1	2	N/A	
2	-12	6-8-~~10~~3.0	↓	11:29							X									1	1			
3	-13	6-8-~~300~~5.0		11:33							X									1	1			
4	-14	6-8-~~507~~7.5		11:33							X									1	1			
5																								
6	-15	6-~~8~~-0.5	5-16	7:17					X	X	X		X							1				
7	-16	6-~~8~~-1.0		7:17							X									1				
8	-17	6-~~8~~-3.0		7:19	X	X	X	X			X									1				
9	-18	6-~~8~~-5.0	↓	7:19							X								↓	1	↓	↓	↓	
10																								

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # / Type: 1-Tube, 2-VOA, 3-Liter, 4-Pint, 5-Jar, 6-Todlar, 7-Canister / Material: 1-Glass, 2-Plastic, 3-Metal / Preservative: 1-HCl, 2-HNO3, 3-H2SO4, 4-NaOH, 5-Zn(Ac)2, 6-NaOH, 7-NaAsO2

QA/QC
- ☐ Routine
- ☐ Caltrans
- ☐ Legal
- ☐ RWQCB
- ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
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   - TAT = 0 : 100% Surcharge SAME BUSINESS DAY (if received by 8:00 AM)
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
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4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TAT's will incur a surcharge respective to the subcontract lab. - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; no samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for thirty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $10/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Tetres	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 12 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL		Condition	Y	N	Condition	Y	N
☐ FedEx ☐ Contract	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ GSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other _____	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:

City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.: | PO #:
Sampler:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	#	Type: 1=Tedlar, 2=VOA, 3=Liter, 4=Pint, 5=Liter, 6=Tedlar, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=4C, 5=Unpreserved, 6=NaOH, 7=NaHSO4	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	1702036-89	7-1-0.5	5/16	7:42	X	X	X	X			X								5	1	1	2	N/A		
2	-90	7-1-1.0		7:42	X	X	X	X	X	X	X		X												
3		7-1-3.0									X														
4		7-1-5.0									X														
5																									
6	-91	7-5-0.5		8:11							X														
7	-92	7-5-1.0		8:11	X	X	X	X	X	X	X		X												
8	-93	7-5-3.0		8:13							X														
9	-94	7.5-5.0		8:13	X	X	X	X			X														
10																									

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
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3. The following turnaround time conditions apply.
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
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4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, or samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for 5 or (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples, Complimentary storage for forty five (45) calendar days from receipt of samples. $2/sample/month of extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $30/ sample/week if extended storage is requested.
   Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformat of report; $35 per report issued EDD.
10. Push TCLP/SPLP/DLC samples: add 2 days to analysis TAT for extraction to proceed.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Dow Terms	5-16-17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 13 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt			
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL ☐ Fedex ☐ Contract ☐ GSO ☐ Other:	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type	Container: Material	Container: Preservative	REMARKS
1	1703036-95	7-6-0.5	5/16	8:34	X	X	X	X	X	X	X		X						5	1	1	2	N/A	
2	-96	7-6-1.0		8:34							X													
3	-97	7-6-3.0		8:36							X													
4	-98	7-6-5.0		8:36	X	X	X	X			X													
5																								
6	-99	7-7-0.5		8:23							X													
7	-AA	7-7-1.0		8:23					X	X	X		X											
8	-AB	7-7-3.0		8:25	X	X	X	X			X													
9	-AC	7-7-5.0		8:25	X	X	X	X			X													
10																								

TERMS

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   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 200% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 150% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 100% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - 35% for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
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Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan DeTevis	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date	Time
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 14 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only			ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt		
☐ Client ☐ ATL ☐ Fedex ☐ OnTrac ☐ GSO ☐ Other	Condition	Y	N
	1. CHILLED	☐	☐
	2. HEADSPACE (VOA)	☐	☐
	3. CONTAINER INTACT	☐	☐
	4. SEALED	☐	☐
	5. # OF SAMPLES MATCH COC	☐	☐
	6. PRESERVED	☐	☐
	7. COOLER TEMP, deg C:		

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	LEAD	Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type	Container: Material	Preservative	QA/QC	REMARKS
1	1705936-AD	8-1-0.5	5/16	9:17										X												
2	-AE	8-1-1.0		9:17										X												
3	-AF	8-1-3.0		9:20										X												
4	-AG	8-1-5.0		9:20										X												
5																										
6	-AH	8-2-0.5		9:08										X												
7	-AI	8-2-1.0		9:08										X												
8	-AJ	8-2-3.0		9:11										X												
9	-AK	8-2-5.0		9:11										X												
10																										

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 35% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 25% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $10/ sample/week if extended storage is requested.
   - Hard copy and regenerated report/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report, $15 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unpreserved samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Torres	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 15 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ FedEx ☐ Courier	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ GSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other:	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Type: 1=Tedlar, 2=VOA, 3=Liter, 4=Pint: Sulfur, 6=Tedlar, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=4C, 5=Zn(Ac)2, 6=NaOH, 7=NaAsO2	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	1702336 - 01	8-3-0.5	5/16	8:52							X								5	1	1	2	NA	
2	- 02	8-3-1.0	↓	8:52	X	X	X	X	X	X	X		X						↓	↓	↓	↓	↓	
3	- 03	8-3-3.0		8:55							X													
4	- 04	8-3-5.0	↓	8:55	X	X	X	X			X								↓	↓	↓	↓	↓	
5																								
6																								
7																								
8																								
9																								
10																								

TERMS

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2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 300% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 150% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 125% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 100% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab — ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for thirty (30) calendar days from receipt of samples. $2/sample/month of extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week of extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report. $45 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Non-analyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Torres	5-16-17	1:57		5/16/17	3:57
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715
Method of Transport		Sample Conditions Upon Receipt		
		Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand & Assoc	Address: 250 GODDARD		Tel: (949) 777-1266
	City: IRVINE	State: CA Zip: 92618	Fax: (949) 777-1276
SEND REPORT TO:		**SEND INVOICE TO:**	☐ Same as SEND REPORT TO
Attn: Naresh BeNama	Email: naresh@hcieng.com	Attn: Sare	Email:
Company: HAT		Company:	
Address:		Address:	
City:	State: Zip:	City:	State: Zip:

PROJECT SAMPLES

Project Name: 6th St
Project No.: LAC-17-001
Sampler: DAT
Quote No: E17E51
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	METHANE	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	AIR	TAT	Container: #	Container: Type	Container: Material	Preservative	QA/QC	REMARKS
1	1702039-01	2A3-15'	5-16-17	1017								X	X							5	1	T	3	MN		
2	-02	2A-3-10'		10:27								X	X								1	T	3	MN		
3	-03	2A-3-5'		10:32								X	X								1	T	3	MN		
4	-04	2A-1-15'		10:50								X	X								1	T	3	MN		
5	-05	2A-1-10'		10:51								X	X								1	T	3	MN		
6	-06	2A-1-5'		10:56								X	X								1	T	3	MN		
7	-07	2A-2-15'		11:17								X	X								1	T	3	MN		
8	-08	2A-2-10		11:17								X	X								1	T	3	MN		
9	-09	2A-2-5'		11:12								X	X								1	T	3	MN		
10	-10	2A-2-5' Dup		11:21								X	X								1	T	3	MN		

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # = Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Liter; 6=Tedlar; 7=Canister. Material: 1=Glass; 2=Plastic; 3=Metal

Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=Na2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

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   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
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   Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/SPLP samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name) Don Torres	Date: 5-16	Time: 1:56	Received by: (Signature and Printed Name) FED EX	Date: 5/16/17	Time: 1356
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☒ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; METHANE

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL; AIR

Container: TAT; # ; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister; Material: 1=Glass; 2=Plastic; 3=Metal; Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (4C); 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample ID / Location	Date	Time	REMARKS
1	702059-11	2-A-Am	5/16	11:33	
2	-12	6-Am		11:53	
3	-14	7-4-5' DUP		12:24	
4	-13	7-4-5'		12:12	
5	-15	7-1-5'		12:13	
6	-16	7-3-5'		12:20	
7	-17	7-Am		12:31	
8	-18	7-Am Dup		12:31	
9		8-3 - Bad Sample		12:43	Don't Test
10	-19	8-3 Dup		12:51	

TERMS

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   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
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   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
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9. Storage and Report Fees:
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   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Juan Dow Torres	5-16	1:56		5/16/17	1352
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (V0A)	NA	☐	6. PRESERVED	☐	☑
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other: _____	4. SEALED	☐	☑	NO COOLER		

CUSTOMER

Company: Hushmand & Assoc
Address:
Tel:
City: State: Zip:
Fax:

SEND REPORT TO:
Attn: Naresh Bellamkonda Email:
Company: Hushmand & Assoc
Address: 250 Goddard
City: Irvine State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: LAC- 6th St.
Project No.: LAC-17-001
Sampler: DAT
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals) — Lead only; TO-15

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	TAT	Container: #	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3	REMARKS
1	702042-01	9-1-0.5	5-17	6:57	5	1	5	1	M	Lead only
2	-02	9-1-1.0		6:59		1				
3	-03	9-1-3.0		7:06		1				
4	-04	9-1-5.0		7:10		1				
5	-05	9-2-0.5		7:25		1				
6	-06	9-2-1.0		7:28		1				
7	-07	9-3-0.5		7:33		1				
8	-08	9-3-1.0		7:35		1				
9	-09	9-3-3.0		7:45		1				
10	-10	9-3-5.0		7:50		1				

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

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   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
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   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
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11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Torres — Submitter Print Name

Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Torres	5-17-17	8:45		5/17/17	08:45
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

FIELD PHOTOGRAPHS

a. Direct Push Drill Rig with crew working on installation on sample liner

b. Direct Push Drill Rig Penetrating the Asphalt Layer at Soil Boring 1A-4

a. Direct Push Drill Rig with crew working on installation of Vapor Probe at 2A-3

b. Obtaining Ambient Air sample in Area 2A using Summa Canister

a. Hand Auger Sampling at ADL Boring in Area 9

APPENDIX B
QA/QC CHECKLIST

QA/QC, DATA MANAGEMENT AND DATA VERIFICATION AND VALIDATION
SIXTH STREET PARC PHASE II ENVIRONMENTAL SITE INVESTIGATION
Completed by Naresh Bellana and Michael Leonard

1.1 DATA VERIFICATION AND VALIDATION

Data verification and validation should be performed in a manner that materially follows the Tiered approach outlined in the draft Region 9 Superfund Data Evaluation/ Validation Guidance (R9QA/006.1). In accordance with the Guidance it is required that 100% of all data collected be reviewed (per Tier 1A/1B) for the following components (where applicable):

- Completeness Check. __X__DONE
- Chain of Custody (signatures, sample conditions, preservatives, sampling handling/filtering). __X__DONE
- Holding Times. __X__DONE
- Review of Quality Control Summaries including negative control (blanks) and positive control (LCS) along with Sample Specific Controls (replicates, matrix spikes, surrogates, tracers/ yields). __X__DONE
- Overall assessment. __X__DONE

1.2 DATA MANAGEMENT

The following checklist will be followed by the project team to ensure quality of data management:

1. A briefing of all staff expected to work will be conducted by the QA Manager and Health and Safety Officer. The briefing will include project objectives, sampling methods, health and safety and the analysis process. __X__DONE
2. The Standard Operating Procedures (SOPs) included in Appendix B of the SAP will be reviewed and implemented by each staff member who is responsible for the fieldwork. __X__DONE
3. The HAI Project Manager will review regularly and check the project progress against this checklist. __X__DONE
4. The HAI QA Manager will also check the progress against this checklist. __X__DONE
5. The HAI QA Manager and/or Health and Safety Officer will discuss the status during the field work to verify compliance with the SAP and HASP. _X_DONE
6. The HAI Project Manager will receive copies of boring logs, daily reports and chain-of-custody forms (which include laboratory tests requested on each sample) from the field and office staff daily and review for accuracy. __X__DONE
7. The sample testing criteria provided in Section 4.1 of the SAP will be implemented to ensure the testing frequencies and types are being met. __X__DONE

a. A routinely collected soil sample contains sufficient volume for both routine sample analysis and additional laboratory QC analyses. Therefore, a separate soil sample for laboratory QC purposes will not be collected. Field QA/QC will include daily collection of equipment blanks, trip blanks, field blanks and duplicate samples for a total of up to 10% of each sample type (soil, groundwater and ADL). __X__DONE

8. The testing laboratory will certify their QA/QC procedures and include all QC test results in their reports. __X__DONE
9. Laboratory data will be transmitted electronically form the testing laboratory to HAI on the original spreadsheet to avoid errors in transferring data to another form or format. __X__DONE
10. HAI's Senior Environmental Engineer/PE will establish the system for review of the lab results against the relevant criteria, categorizing the soils and assembling of the boring and lab test data on the graphics to be used for evaluating the extent of each soil category. __X__DONE
11. HAI's Senior Environmental Engineer/PE will propose the soil handling plan, conduct internal review and then review the plan with Tetra Tech and the BOE for inputs they may have before finalizing the plan. __X__DONE
12. The draft report of findings and recommendations (including soil handling plan) will be reviewed by HAI's QA Manager and Senior Environmental Engineer/PE prior to submittal to Tetra Tech and BOE for additional review. The final report will incorporate comments by HNTB and BOE staff. __X__DONE

APPENDIX C
LABORATORY TEST RESULTS

March 26, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1502695

Client Reference : Parcel 33 - 600 S Santa Fe St., Los Angeles

Enclosed are the results for sample(s) received on August 05, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VP-1	1502695-01	Air	8/05/15 10:41	8/05/15 13:42
VP-2	1502695-02	Air	8/05/15 10:49	8/05/15 13:42
VP-3	1502695-03	Air	8/05/15 10:12	8/05/15 13:42
VP-4	1502695-04	Air	8/05/15 10:28	8/05/15 13:42
VP-5	1502695-05	Air	8/05/15 10:32	8/05/15 13:42
VP-6	1502695-06	Air	8/05/15 10:59	8/05/15 13:42
VP-7	1502695-07	Air	8/05/15 9:17	8/05/15 13:42
VP-8	1502695-08	Air	8/05/15 8:50	8/05/15 13:42
VP-9	1502695-09	Air	8/05/15 9:00	8/05/15 13:42
VP-10	1502695-10	Air	8/05/15 9:10	8/05/15 13:42
VP-11	1502695-11	Air	8/05/15 9:43	8/05/15 13:42
VP-12	1502695-12	Air	8/05/15 9:50	8/05/15 13:42
VP-3 Dup	1502695-13	Air	8/05/15 10:21	8/05/15 13:42
VP-9 Dup	1502695-14	Air	8/05/15 9:25	8/05/15 13:42

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-1

Lab ID: 1502695-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,1,1-Trichloroethane	**30**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 01:19	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2,4-Trimethylbenzene	**6**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,3,5-Trimethylbenzene	**1**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 01:19	
1,3-Dichlorobenzene	**7**	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 01:19	
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 01:19	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
2-Propanol	**60**	6	10	B5H0287	08/06/2015	08/13/15 11:07	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
4-Methyl-2-pentanone	**3**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 01:19	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 01:19	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 01:19	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 01:19	
Benzene	**0.86**	0.80	1	B5H0228	08/06/2015	08/11/15 01:19	
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-1

Lab ID: 1502695-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 01:19	
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 01:19	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 01:19	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 01:19	
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 01:19	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 01:19	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Cyclohexane	**2**	0.86	1	B5H0228	08/06/2015	08/11/15 01:19	
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Dichlorodifluoromethane	**4**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Ethanol	**110**	5	10	B5H0287	08/06/2015	08/13/15 11:07	
Ethylbenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 01:19	
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 01:19	
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 01:19	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 01:19	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
o-Xylene	**3**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
p-Isopropyltoluene	**1**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Tetrachloroethene	**20**	2	1	B5H0228	08/06/2015	08/11/15 01:19	
Toluene	**30**	0.94	1	B5H0228	08/06/2015	08/11/15 01:19	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 01:19	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Trichloroethene	**40**	1	1	B5H0228	08/06/2015	08/11/15 01:19	
Trichlorofluoromethane	**5**	1	1	B5H0228	08/06/2015	08/11/15 01:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-1

Lab ID: 1502695-01

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**1**	0.88	1	B5H0228	08/06/2015	08/11/15 01:19	
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 01:19	
Surrogate: 4-Bromofluorobenzene	*119 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 11:07*	
Surrogate: 4-Bromofluorobenzene	*116 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 01:19*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**3700**	1000	10	B5H0282	08/12/2015	08/12/15 12:10	
Surrogate: 4-Bromofluorobenzene	*101 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 12:10*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-2

Lab ID: 1502695-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,1,1-Trichloroethane	**70**	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 02:03	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2,4-Trimethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 02:03	
1,3-Dichlorobenzene	**6**	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 02:03	
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
2-Butanone	**4**	0.74	1	B5H0228	08/06/2015	08/11/15 02:03	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
2-Propanol	**40**	0.61	1	B5H0228	08/06/2015	08/11/15 02:03	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
4-Methyl-2-pentanone	**2**	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Acetone	**20**	0.59	1	B5H0228	08/06/2015	08/11/15 02:03	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 02:03	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 02:03	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 02:03	
Benzene	**0.89**	0.80	1	B5H0228	08/06/2015	08/11/15 02:03	
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-2

Lab ID: 1502695-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 02:03	
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 02:03	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 02:03	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 02:03	
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 02:03	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 02:03	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Cyclohexane	**2**	0.86	1	B5H0228	08/06/2015	08/11/15 02:03	
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Dichlorodifluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Ethanol	**90**	5	10	B5H0287	08/06/2015	08/12/15 23:30	
Ethylbenzene	**1**	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 02:03	
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
m,p-Xylene	**10**	4	1	B5H0228	08/06/2015	08/11/15 02:03	
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 02:03	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 02:03	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
o-Xylene	**2**	1	1	B5H0228	08/06/2015	08/11/15 02:03	
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Tetrachloroethene	**30**	2	1	B5H0228	08/06/2015	08/11/15 02:03	
Toluene	**10**	0.94	1	B5H0228	08/06/2015	08/11/15 02:03	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 02:03	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Trichlorofluoromethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 02:03	
Vinyl acetate	**1**	0.88	1	B5H0228	08/06/2015	08/11/15 02:03	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-2

Lab ID: 1502695-02

Volatile Organic Compounds in AIR by TO-15 (Canister) — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 02:03	
Surrogate: 4-Bromofluorobenzene	*112 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/12/15 23:30*	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 02:03*	

Gasoline Range Organics in Air by TO-3 — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1900**	1000	10	B5H0282	08/12/2015	08/12/15 12:46	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 12:46*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3

Lab ID: 1502695-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,1,1-Trichloroethane	**90**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,1-Dichloroethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 02:46	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2,4-Trimethylbenzene	**4**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 02:46	
1,3-Dichlorobenzene	**7**	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 02:46	
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 02:46	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
2-Propanol	**160**	6	10	B5H0287	08/06/2015	08/13/15 00:05	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
4-Methyl-2-pentanone	**3**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 02:46	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 02:46	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 02:46	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 02:46	
Benzene	**0.89**	0.80	1	B5H0228	08/06/2015	08/11/15 02:46	
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3

Lab ID: 1502695-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 02:46	
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 02:46	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 02:46	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 02:46	
Chloroform	**2**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 02:46	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 02:46	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 02:46	
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Dichlorodifluoromethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Ethanol	**140**	5	10	B5H0287	08/06/2015	08/13/15 00:05	
Ethylbenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 02:46	
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 02:46	
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 02:46	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 02:46	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
o-Xylene	**3**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Tetrachloroethene	**30**	2	1	B5H0228	08/06/2015	08/11/15 02:46	
Toluene	**20**	0.94	1	B5H0228	08/06/2015	08/11/15 02:46	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 02:46	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Trichlorofluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 02:46	
Vinyl acetate	**1**	0.88	1	B5H0228	08/06/2015	08/11/15 02:46	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3

Lab ID: 1502695-03

Volatile Organic Compounds in AIR by TO-15 (Canister) — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 02:46	
Surrogate: 4-Bromofluorobenzene	*109 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 02:46*	
Surrogate: 4-Bromofluorobenzene	*112 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 00:05*	

Gasoline Range Organics in Air by TO-3 — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2100**	1000	10	B5H0282	08/12/2015	08/12/15 13:21	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 13:21*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-4
Lab ID: 1502695-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,1,1-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2,4-Trimethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,3-Dichlorobenzene	**5**	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
2-Propanol	**1100**	30	50	B5H0287	08/06/2015	08/13/15 12:19	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
4-Methyl-2-pentanone	**1**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Acetone	**20**	0.59	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Benzene	**0.83**	0.80	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-4
Lab ID: 1502695-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Chlorobenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Chloromethane	**0.68**	0.52	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Dichlorodifluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Ethanol	**60**	5	10	B5H0287	08/06/2015	08/13/15 00:40	
Ethylbenzene	**4**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
m,p-Xylene	**30**	4	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Methylene chloride	**0.94**	0.87	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Naphthalene	**2**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
o-Xylene	**4**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Tetrachloroethene	**4**	2	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Toluene	**80**	9	10	B5H0287	08/06/2015	08/13/15 00:40	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Trichloroethene	**2**	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Trichlorofluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-4

Lab ID: 1502695-04

Volatile Organic Compounds in AIR by TO-15 (Canister) — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 03:30	E3, E4
Surrogate: 4-Bromofluorobenzene	*109 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 03:30*	
Surrogate: 4-Bromofluorobenzene	*111 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 12:19*	
Surrogate: 4-Bromofluorobenzene	*114 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 00:40*	

Gasoline Range Organics in Air by TO-3 — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2700**	1000	10	B5H0282	08/12/2015	08/12/15 13:55	
Surrogate: 4-Bromofluorobenzene	*101 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 13:55*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-5
Lab ID: 1502695-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,1,1-Trichloroethane	**80**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E4, E3
1,1-Dichloroethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2,4-Trimethylbenzene	**4**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E4, E3
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,3-Dichlorobenzene	**7**	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
2,2,4-Trimethylpentane	**1**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
2-Butanone	**3**	0.74	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
2-Propanol	**160**	6	10	B5H0287	08/06/2015	08/13/15 01:15	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
4-Methyl-2-pentanone	**3**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Benzene	**0.83**	0.80	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-5

Lab ID: 1502695-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Dichlorodifluoromethane	**1**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Ethanol	**200**	5	10	B5H0287	08/06/2015	08/13/15 01:15	
Ethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
o-Xylene	**4**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Tetrachloroethene	**20**	2	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Toluene	**40**	0.94	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Trichloroethene	**80**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Trichlorofluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-5

Lab ID: 1502695-05

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**2**	0.88	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 04:13	E3, E4
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 04:13*	
Surrogate: 4-Bromofluorobenzene	*115 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 01:15*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**3700**	1000	10	B5H0282	08/12/2015	08/12/15 17:22	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 17:22*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-6
Lab ID: 1502695-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,1,1-Trichloroethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2,4-Trimethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,3-Dichlorobenzene	**7**	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
2-Propanol	**370**	6	10	B5H0287	08/06/2015	08/13/15 01:50	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
4-Methyl-2-pentanone	**1**	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Benzene	**1**	0.80	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-6
Lab ID: 1502695-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Chloromethane	**2**	0.52	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Dichlorodifluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Ethanol	**70**	5	10	B5H0287	08/06/2015	08/13/15 01:50	
Ethylbenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
m,p-Xylene	**10**	4	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Methylene chloride	**1**	0.87	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
o-Xylene	**2**	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Tetrachloroethene	**6**	2	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Toluene	**30**	0.94	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Trichloroethene	**10**	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Trichlorofluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-6

Lab ID: 1502695-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 04:55	E3, E4
Surrogate: 4-Bromofluorobenzene	*113 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 01:50*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 04:55*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1700**	1000	10	B5H0343	08/13/2015	08/13/15 11:56	
Surrogate: 4-Bromofluorobenzene	*100 %*		*70 - 130*		B5H0343	08/13/2015	*08/13/15 11:56*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7

Lab ID: 1502695-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,1,1-Trichloroethane	**40**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2,4-Trimethylbenzene	**4**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,3,5-Trimethylbenzene	**1**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,3-Dichlorobenzene	**9**	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
2,2,4-Trimethylpentane	**1**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
2-Propanol	**50**	0.61	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
4-Ethyl Toluene	**2**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
4-Methyl-2-pentanone	**3**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Benzene	**0.89**	0.80	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7

Lab ID: 1502695-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Dichlorodifluoromethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Ethanol	**200**	5	10	B5H0287	08/06/2015	08/13/15 02:25	
Ethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
o-Xylene	**4**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Tetrachloroethene	**40**	2	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Toluene	**20**	0.94	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Trichloroethene	ND	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Trichlorofluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7

Lab ID: 1502695-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 05:36	E3, E4
Surrogate: 4-Bromofluorobenzene	*113 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 02:25*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 05:36*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1900**	1000	10	B5H0282	08/12/2015	08/12/15 18:30	
Surrogate: 4-Bromofluorobenzene	*98.0 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 18:30*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-8
Lab ID: 1502695-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,1,1-Trichloroethane	**20**	1	1	B5H0228	08/06/2015	08/11/15 06:20	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 06:20	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2,4-Trimethylbenzene	**5**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,3,5-Trimethylbenzene	**1**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,3-Dichlorobenzene	**8**	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
2,2,4-Trimethylpentane	**2**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 06:20	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
2-Propanol	**100**	6	10	B5H0287	08/06/2015	08/13/15 03:03	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
4-Ethyl Toluene	**1**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
4-Methyl-2-pentanone	**4**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 06:20	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 06:20	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 06:20	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 06:20	
Benzene	**1**	0.80	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-8

Lab ID: 1502695-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 06:20	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 06:20	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 06:20	
Chloroform	**2**	1	1	B5H0228	08/06/2015	08/11/15 06:20	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 06:20	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 06:20	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
Cyclohexane	**2**	0.86	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Dichlorodifluoromethane	**8**	1	1	B5H0228	08/06/2015	08/11/15 06:20	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	
Ethanol	**330**	5	10	B5H0287	08/06/2015	08/13/15 03:03	
Ethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 06:20	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 06:20	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 06:20	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
o-Xylene	**4**	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E4, E3
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Tetrachloroethene	**20**	2	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Toluene	**10**	0.94	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 06:20	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Trichloroethene	ND	1	1	B5H0228	08/06/2015	08/11/15 06:20	E3, E4
Trichlorofluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 06:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-8

Lab ID: 1502695-08

Volatile Organic Compounds in AIR by TO-15 (Canister) — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**3**	0.88	1	B5H0228	08/06/2015	08/11/15 06:20	
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 06:20	
Surrogate: 4-Bromofluorobenzene	*118 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 03:03*	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 06:20*	

Gasoline Range Organics in Air by TO-3 — **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2200**	1000	10	B5H0282	08/12/2015	08/12/15 19:06	
Surrogate: 4-Bromofluorobenzene	*101 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 19:06*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9

Lab ID: 1502695-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,1,1-Trichloroethane	**9**	1	1	B5H0228	08/06/2015	08/11/15 07:04	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 07:04	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2,4-Trimethylbenzene	**6**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,3,5-Trimethylbenzene	**1**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 07:04	
1,3-Dichlorobenzene	**8**	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
2,2,4-Trimethylpentane	**1**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 07:04	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
2-Propanol	**80**	6	10	B5H0287	08/06/2015	08/13/15 03:40	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
4-Ethyl Toluene	**1**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
4-Methyl-2-pentanone	**3**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 07:04	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 07:04	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 07:04	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 07:04	
Benzene	**0.89**	0.80	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9

Lab ID: 1502695-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 07:04	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 07:04	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 07:04	
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 07:04	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 07:04	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Dichlorodifluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 07:04	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	
Ethanol	**250**	5	10	B5H0287	08/06/2015	08/13/15 03:40	
Ethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 07:04	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 07:04	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 07:04	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
o-Xylene	**5**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E4, E3
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Tetrachloroethene	**40**	2	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Toluene	**40**	0.94	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 07:04	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Trichloroethene	**2**	1	1	B5H0228	08/06/2015	08/11/15 07:04	E3, E4
Trichlorofluoromethane	**1**	1	1	B5H0228	08/06/2015	08/11/15 07:04	

Certificate of Analysis

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250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9

Lab ID: 1502695-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**2**	0.88	1	B5H0228	08/06/2015	08/11/15 07:04	
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 07:04	
Surrogate: 4-Bromofluorobenzene	*114 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 03:40*	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 07:04*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2000**	1000	10	B5H0282	08/12/2015	08/12/15 20:49	
Surrogate: 4-Bromofluorobenzene	*102 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 20:49*	

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250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-10

Lab ID: 1502695-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,1,1-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2,4-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,3-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
2-Butanone	ND	0.74	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
4-Methyl-2-pentanone	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Acetone	**2**	0.59	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Benzene	ND	0.80	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4

Certificate of Analysis

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250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-10

Lab ID: 1502695-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Cyclohexane	ND	0.86	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Dichlorodifluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Ethanol	**280**	5	10	B5H0287	08/06/2015	08/13/15 11:44	
Ethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
m,p-Xylene	ND	4	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E4, E3
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E4, E3
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
o-Xylene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E4, E3
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E4, E3
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E4, E3
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E4, E3
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Tetrachloroethene	**2**	2	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Toluene	**2**	0.94	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Trichloroethene	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Trichlorofluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Vinyl acetate	ND	0.88	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
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Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-10

Lab ID: 1502695-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 07:55	E3, E4
Surrogate: 4-Bromofluorobenzene	*116 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 11:44*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 07:55*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2600**	1000	10	B5H0282	08/12/2015	08/13/15 01:58	
Surrogate: 4-Bromofluorobenzene	*99.2 %*		*70 - 130*		B5H0282	08/12/2015	*08/13/15 01:58*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
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Client Sample ID VP-11

Lab ID: 1502695-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,1,1-Trichloroethane	**7**	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,2,4-Trimethylbenzene	**4**	1	1	B5H0228	08/06/2015	08/11/15 11:05	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
1,3-Dichlorobenzene	**7**	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
2,2,4-Trimethylpentane	**2**	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
2-Butanone	**1**	0.74	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
2-Propanol	**40**	0.61	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
4-Methyl-2-pentanone	**4**	1	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
Acetone	**8**	0.59	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
Benzene	ND	0.80	1	B5H0228	08/06/2015	08/11/15 11:05	E4, E3
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-11

Lab ID: 1502695-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 11:05	
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Dichlorodifluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Ethanol	**200**	5	10	B5H0287	08/06/2015	08/13/15 08:33	
Ethylbenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 11:05	
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 11:05	
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 11:05	
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
o-Xylene	**3**	1	1	B5H0228	08/06/2015	08/11/15 11:05	
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	
Tetrachloroethene	**20**	2	1	B5H0228	08/06/2015	08/11/15 11:05	
Toluene	**10**	0.94	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Trichloroethene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Trichlorofluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-11

Lab ID: 1502695-11

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**0.88**	0.88	1	B5H0228	08/06/2015	08/11/15 11:05	E3, E4
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 11:05	
Surrogate: 4-Bromofluorobenzene	*114 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 11:05*	
Surrogate: 4-Bromofluorobenzene	*116 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 08:33*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**4300**	1000	10	B5H0343	08/13/2015	08/13/15 10:29	
Surrogate: 4-Bromofluorobenzene	*102 %*		*70 - 130*		B5H0343	08/13/2015	*08/13/15 10:29*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-12

Lab ID: 1502695-12

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,1,1-Trichloroethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2,4-Trimethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,3-Dichlorobenzene	**7**	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
2,2,4-Trimethylpentane	**1**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
2-Butanone	**1**	0.74	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
2-Propanol	**40**	0.61	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
4-Methyl-2-pentanone	**2**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Acetone	**9**	0.59	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Benzene	ND	0.80	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-12

Lab ID: 1502695-12

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Dichlorodifluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Ethanol	**200**	5	10	B5H0287	08/06/2015	08/13/15 09:09	
Ethylbenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
m,p-Xylene	**10**	4	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
o-Xylene	**3**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Tetrachloroethene	**70**	2	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Toluene	**10**	0.94	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Trichloroethene	ND	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Trichlorofluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-12

Lab ID: 1502695-12

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 11:47	E3, E4
Surrogate: 4-Bromofluorobenzene	*114 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 09:09*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 11:47*	E3

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2900**	1000	10	B5H0282	08/12/2015	08/12/15 23:04	
Surrogate: 4-Bromofluorobenzene	*110 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 23:04*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3 Dup
Lab ID: 1502695-13

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,1,1-Trichloroethane	**160**	10	10	B5H0364	08/06/2015	08/13/15 22:11	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
1,1-Dichloroethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 12:31	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 12:31	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,2,4-Trimethylbenzene	**4**	1	1	B5H0228	08/06/2015	08/11/15 12:31	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
1,3,5-Trimethylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 12:31	
1,3-Dichlorobenzene	**8**	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
2,2,4-Trimethylpentane	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
2-Butanone	**1**	0.74	1	B5H0228	08/06/2015	08/11/15 12:31	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
2-Hexanone	**1**	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
2-Propanol	**120**	6	10	B5H0287	08/06/2015	08/13/15 09:44	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
4-Ethyl Toluene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
4-Methyl-2-pentanone	**2**	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 12:31	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 12:31	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 12:31	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 12:31	
Benzene	ND	0.80	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3

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Client Sample ID VP-3 Dup
Lab ID: 1502695-13

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 12:31	
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 12:31	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 12:31	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 12:31	
Chloroform	**3**	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 12:31	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 12:31	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3
Cyclohexane	**1**	0.86	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3
Dichlorodifluoromethane	**3**	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
Ethanol	**90**	5	10	B5H0287	08/06/2015	08/13/15 09:44	
Ethylbenzene	**2**	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 12:31	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 12:31	
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
m,p-Xylene	**10**	4	1	B5H0228	08/06/2015	08/11/15 12:31	
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 12:31	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 12:31	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
o-Xylene	**3**	1	1	B5H0228	08/06/2015	08/11/15 12:31	
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	
Tetrachloroethene	**40**	2	1	B5H0228	08/06/2015	08/11/15 12:31	
Toluene	**10**	0.94	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 12:31	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 12:31	E4, E3
Trichloroethene	**420**	1	1	B5H0228	08/06/2015	08/11/15 12:31	E3, E4
Trichlorofluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 12:31	

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Client Sample ID VP-3 Dup

Lab ID: 1502695-13

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**0.95**	0.88	1	B5H0228	08/06/2015	08/11/15 12:31	
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 12:31	
Surrogate: 4-Bromofluorobenzene	*113 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 09:44*	
Surrogate: 4-Bromofluorobenzene	*112 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 12:31*	
Surrogate: 4-Bromofluorobenzene	*99.6 %*		*79.2 - 147*		B5H0364	08/06/2015	*08/13/15 22:11*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**3000**	1000	10	B5H0282	08/12/2015	08/12/15 23:38	
Surrogate: 4-Bromofluorobenzene	*105 %*		*70 - 130*		B5H0282	08/12/2015	*08/12/15 23:38*	

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Client Sample ID VP-9 Dup
Lab ID: 1502695-14

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,1,1-Trichloroethane	**9**	1	1	B5H0228	08/06/2015	08/11/15 13:14	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,1,2-Trichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,1-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	
1,1-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 13:14	
1,1-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2,3-Trichloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2,4-Trichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2,4-Trimethylbenzene	**5**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2-Dibromoethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2-Dichloroethane	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,2-Dichloropropane	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,3,5-Trimethylbenzene	**1**	1	1	B5H0228	08/06/2015	08/11/15 13:14	
1,3-Butadiene	ND	0.55	1	B5H0228	08/06/2015	08/11/15 13:14	
1,3-Dichlorobenzene	**8**	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,4-Dichlorobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
1,4-Dioxane	ND	0.90	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
2,2,4-Trimethylpentane	**2**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
2-Butanone	**2**	0.74	1	B5H0228	08/06/2015	08/11/15 13:14	
2-Chloroethyl vinyl ether	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
2-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
2-Hexanone	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
2-Propanol	**110**	6	10	B5H0287	08/06/2015	08/13/15 10:20	
4-Chlorotoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
4-Ethyl Toluene	**1**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
4-Methyl-2-pentanone	**3**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Acetone	**10**	0.59	1	B5H0228	08/06/2015	08/11/15 13:14	
Acetonitrile	ND	0.42	1	B5H0228	08/06/2015	08/11/15 13:14	
Acrolein	ND	0.57	1	B5H0228	08/06/2015	08/11/15 13:14	
Acrylonitrile	ND	0.54	1	B5H0228	08/06/2015	08/11/15 13:14	
Benzene	**2**	0.80	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Benzyl chloride	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Bromobenzene	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Bromodichloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4

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Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9 Dup
Lab ID: 1502695-14

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Bromomethane	ND	0.97	1	B5H0228	08/06/2015	08/11/15 13:14	
Carbon disulfide	ND	0.78	1	B5H0228	08/06/2015	08/11/15 13:14	
Carbon tetrachloride	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Chlorobenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Chloroethane	ND	0.66	1	B5H0228	08/06/2015	08/11/15 13:14	
Chloroform	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	
Chloromethane	ND	0.52	1	B5H0228	08/06/2015	08/11/15 13:14	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 13:14	
cis-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Cyclohexane	**2**	0.86	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Dibromochloromethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Dibromomethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Dichlorodifluoromethane	**2**	1	1	B5H0228	08/06/2015	08/11/15 13:14	
Dichlorotetrafluoroethane	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	
Ethanol	**230**	5	10	B5H0287	08/06/2015	08/13/15 10:20	
Ethylbenzene	**3**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Freon-113	ND	2	1	B5H0228	08/06/2015	08/11/15 13:14	
Hexachlorobutadiene	ND	3	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
Isopropylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
m,p-Xylene	**20**	4	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
Methylene chloride	ND	0.87	1	B5H0228	08/06/2015	08/11/15 13:14	
MTBE	ND	0.90	1	B5H0228	08/06/2015	08/11/15 13:14	
n-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
n-Propylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
Naphthalene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
o-Xylene	**4**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
p-Isopropyltoluene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E4, E3
sec-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Styrene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
tert-Butylbenzene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Tetrachloroethene	**20**	2	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Toluene	**20**	0.94	1	B5H0228	08/06/2015	08/11/15 13:14	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0228	08/06/2015	08/11/15 13:14	
trans-1,3-Dichloropropene	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Trichloroethene	**2**	1	1	B5H0228	08/06/2015	08/11/15 13:14	E3, E4
Trichlorofluoromethane	ND	1	1	B5H0228	08/06/2015	08/11/15 13:14	

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Client Sample ID VP-9 Dup

Lab ID: 1502695-14

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**2**	0.88	1	B5H0228	08/06/2015	08/11/15 13:14	
Vinyl chloride		ND	0.64	1	B5H0228	08/06/2015	08/11/15 13:14	
Surrogate: 4-Bromofluorobenzene	*112 %*		*79.2 - 147*		B5H0287	08/06/2015	*08/13/15 10:20*	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0228	08/06/2015	*08/11/15 13:14*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2600**	1000	10	B5H0282	08/12/2015	08/13/15 00:13	
Surrogate: 4-Bromofluorobenzene	*106 %*		*70 - 130*		B5H0282	08/12/2015	*08/13/15 00:13*	

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QUALITY CONTROL SECTION

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0228 - No_Prep_AIR										
Blank (B5H0228-BLK1)					Prepared: 8/10/2015 Analyzed: 8/10/2015					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0228 - No_Prep_AIR (continued)										
Blank (B5H0228-BLK1) - Continued					Prepared: 8/10/2015 Analyzed: 8/10/2015					
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*18.11*			*17.8935*		*101*	*79.2 - 147*			
LCS (B5H0228-BS1)					Prepared: 8/10/2015 Analyzed: 8/10/2015					
1,1,1,2-Tetrachloroethane	13.524	2	0.57	13.7299		98.5	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0228 - No_Prep_AIR (continued)										
LCS (B5H0228-BS1) - Continued					Prepared: 8/10/2015 Analyzed: 8/10/2015					
1,1,1-Trichloroethane	10.694	1	0.58	10.9123		98.0	70 - 130			
1,1,2,2-Tetrachloroethane	13.524	2	0.77	13.7299		98.5	70 - 130			
1,1,2-Trichloroethane	11.240	1	0.45	10.9123		103	70 - 130			
1,1-Dichloroethane	7.488	1	0.37	8.09480		92.5	70 - 130			
1,1-Dichloroethene	6.146	0.99	0.34	7.92990		77.5	70 - 130			
1,1-Dichloropropene	11.074	1	0.37	9.07722		122	70 - 130			
1,2,3-Trichloropropane	10.733	2	0.58	12.0597		89.0	70 - 130			
1,2,4-Trichlorobenzene	16.549	2	0.73	14.8422		112	70 - 130			
1,2,4-Trimethylbenzene	11.503	1	0.54	9.83166		117	70 - 130			
1,2-Dibromo-3-chloropropane	21.942	2	1	19.3319		114	70 - 130			
1,2-Dibromoethane	15.444	2	0.73	15.3670		100	70 - 130			
1,2-Dichlorobenzene	11.544	2	0.54	12.0246		96.0	70 - 130			
1,2-Dichloroethane	11.252	1	0.34	8.09480		139	70 - 130			L5
1,2-Dichloropropane	9.889	1	0.41	9.24213		107	70 - 130			
1,3,5-Trimethylbenzene	10.077	1	0.51	9.83166		102	70 - 130			
1,3-Butadiene	4.668	0.55	0.39	4.42454		106	70 - 130			
1,3-Dichlorobenzene	11.604	2	0.56	12.0246		96.5	70 - 130			
1,4-Dichlorobenzene	11.664	2	0.51	12.0246		97.0	70 - 130			
1,4-Dioxane	8.036	0.90	0.65	7.20695		112	70 - 130			
2,2,4-Trimethylpentane	9.484	1	0.35	9.34388		102	70 - 130			
2-Butanone	5.928	0.74	0.24	5.89824		100	70 - 130			
2-Chloroethyl vinyl ether	10.546	1	0.22	8.71583		121	70 - 130			
2-Chlorotoluene	10.924	1	0.50	10.3544		106	70 - 130			
2-Hexanone	10.323	1	0.43	8.19296		126	70 - 130			
2-Propanol	5.603	0.61	0.26	4.91534		114	70 - 130			
4-Chlorotoluene	7.455	1	0.47	10.3544		72.0	70 - 130			
4-Ethyl Toluene	9.979	1	0.47	9.83166		102	70 - 130			
4-Methyl-2-pentanone	10.282	1	0.30	8.19296		126	70 - 130			
Acetone	5.202	0.59	0.26	4.75084		110	70 - 130			
Acetonitrile	3.744	0.42	0.14	3.35804		112	70 - 130			
Acrolein	6.673	0.57	0.22	4.58593		146	70 - 130			L5
Acrylonitrile	4.080	0.54	0.18	4.34053		94.0	70 - 130			
Benzene	6.485	0.80	0.28	6.38953		102	70 - 130			
Benzyl chloride	11.649	1	0.37	10.3544		112	70 - 130			
Bromobenzene	10.082	2	0.59	12.8432		78.5	70 - 130			
Bromodichloromethane	16.148	2	0.70	13.4011		120	70 - 130			
Bromoform	19.226	3	0.90	20.6733		93.0	70 - 130			
Bromomethane	7.960	0.97	0.46	7.76597		102	70 - 130			
Carbon disulfide	5.201	0.78	0.31	6.22847		83.5	70 - 130			
Carbon tetrachloride	15.602	2	0.43	12.5826		124	70 - 130			
Chlorobenzene	8.148	1	0.41	9.20712		88.5	70 - 130			
Chloroethane	5.409	0.66	0.28	5.27722		102	70 - 130			

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0228 - No_Prep_AIR (continued)										
LCS (B5H0228-BS1) - Continued					Prepared: 8/10/2015 Analyzed: 8/10/2015					
Chloroform	9.277	1	0.50	9.76499		95.0	70 - 130			
Chloromethane	4.068	0.52	0.22	4.12982		98.5	70 - 130			
cis-1,2-Dichloroethene	5.947	0.99	0.28	7.92990		75.0	70 - 130			
cis-1,3-Dichloropropene	9.576	1	0.33	9.07724		106	70 - 130			
Cyclohexane	7.263	0.86	0.25	6.88425		106	70 - 130			
Dibromochloromethane	16.696	2	0.83	17.0371		98.0	70 - 130			
Dibromomethane	19.694	2	0.55	14.2196		138	70 - 130			L5
Dichlorodifluoromethane	10.237	1	0.56	9.89063		104	70 - 130			
Dichlorotetrafluoroethane	13.911	2	0.76	13.9812		99.5	70 - 130			
Ethanol	4.503	0.47	0.20	3.76834		120	70 - 130			
Ethylbenzene	8.380	1	0.35	8.68425		96.5	70 - 130			
Freon-113	13.028	2	0.58	15.3272		85.0	70 - 130			
Hexachlorobutadiene	18.984	3	1	21.3300		89.0	70 - 130			
Isopropylbenzene	9.832	1	0.52	9.83166		100	70 - 130			
m,p-Xylene	35.432	4	1	34.7370		102	70 - 130			
Methylene chloride	5.593	0.87	0.31	6.94740		80.5	70 - 130			
MTBE	6.742	0.90	0.33	7.21047		93.5	70 - 130			
n-Butylbenzene	12.626	1	0.42	10.9790		115	70 - 130			
n-Propylbenzene	8.947	1	0.41	9.83166		91.0	70 - 130			
Naphthalene	11.323	1	0.36	10.4843		108	70 - 130			
o-Xylene	8.945	1	0.40	8.68425		103	70 - 130			
p-Isopropyltoluene	10.101	1	0.51	10.9790		92.0	70 - 130			
sec-Butylbenzene	11.912	1	0.56	10.9790		108	70 - 130			
Styrene	7.795	1	0.44	8.51934		91.5	70 - 130			
tert-Butylbenzene	11.089	1	0.62	10.9790		101	70 - 130			
Tetrachloroethene	11.937	2	0.47	13.5650		88.0	70 - 130			
Toluene	7.348	0.94	0.28	7.53688		97.5	70 - 130			
trans-1,2-Dichloroethene	6.265	0.99	0.34	7.92990		79.0	70 - 130			
trans-1,3-Dichloropropene	10.257	1	0.34	9.07722		113	70 - 130			
Trichloroethene	9.673	1	0.47	10.7474		90.0	70 - 130			
Trichlorofluoromethane	14.158	1	0.53	11.2366		126	70 - 130			
Vinyl acetate	7.746	0.88	0.38	7.04204		110	70 - 130			
Vinyl chloride	4.780	0.64	0.21	5.11231		93.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	*19.40*			*17.8935*		*108*	*79.2 - 147*			
LCS Dup (B5H0228-BSD1)					Prepared: 8/10/2015 Analyzed: 8/10/2015					
1,1,1,2-Tetrachloroethane	12.563	2	0.57	13.7299		91.5	70 - 130	7.37	20	
1,1,1-Trichloroethane	9.821	1	0.58	10.9123		90.0	70 - 130	8.51	20	
1,1,2,2-Tetrachloroethane	12.563	2	0.77	13.7299		91.5	70 - 130	7.37	20	
1,1,2-Trichloroethane	10.312	1	0.45	10.9123		94.5	70 - 130	8.61	20	
1,1-Dichloroethane	7.123	1	0.37	8.09480		88.0	70 - 130	4.99	20	

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0228 - No_Prep_AIR (continued)										
LCS Dup (B5H0228-BSD1) - Continued					Prepared: 8/10/2015 Analyzed: 8/10/2015					
1,1-Dichloroethene	6.423	0.99	0.34	7.92990		81.0	70 - 130	4.42	20	
1,1-Dichloropropene	11.347	1	0.37	9.07722		125	70 - 130	2.43	20	
1,2,3-Trichloropropane	10.552	2	0.58	12.0597		87.5	70 - 130	1.70	20	
1,2,4-Trichlorobenzene	13.877	2	0.73	14.8422		93.5	70 - 130	17.6	20	
1,2,4-Trimethylbenzene	10.471	1	0.54	9.83166		106	70 - 130	9.40	20	
1,2-Dibromo-3-chloropropane	21.362	2	1	19.3319		110	70 - 130	2.68	20	
1,2-Dibromoethane	13.830	2	0.73	15.3670		90.0	70 - 130	11.0	20	
1,2-Dichlorobenzene	11.183	2	0.54	12.0246		93.0	70 - 130	3.17	20	
1,2-Dichloroethane	9.997	1	0.34	8.09480		124	70 - 130	11.8	20	
1,2-Dichloropropane	9.011	1	0.41	9.24213		97.5	70 - 130	9.29	20	
1,3,5-Trimethylbenzene	9.389	1	0.51	9.83166		95.5	70 - 130	7.07	20	
1,3-Butadiene	4.314	0.55	0.39	4.42454		97.5	70 - 130	7.88	20	
1,3-Dichlorobenzene	11.123	2	0.56	12.0246		92.5	70 - 130	4.23	20	
1,4-Dichlorobenzene	11.063	2	0.51	12.0246		92.0	70 - 130	5.29	20	
1,4-Dioxane	7.351	0.90	0.65	7.20695		102	70 - 130	8.90	20	
2,2,4-Trimethylpentane	8.690	1	0.35	9.34388		93.0	70 - 130	8.74	20	
2-Butanone	5.544	0.74	0.24	5.89824		94.0	70 - 130	6.68	20	
2-Chloroethyl vinyl ether	11.026	1	0.22	8.71583		126	70 - 130	4.44	20	
2-Chlorotoluene	10.458	1	0.50	10.3544		101	70 - 130	4.36	20	
2-Hexanone	9.176	1	0.43	8.19296		112	70 - 130	11.8	20	
2-Propanol	5.186	0.61	0.26	4.91534		106	70 - 130	7.74	20	
4-Chlorotoluene	7.403	1	0.47	10.3544		71.5	70 - 130	0.697	20	
4-Ethyl Toluene	9.340	1	0.47	9.83166		95.0	70 - 130	6.62	20	
4-Methyl-2-pentanone	9.299	1	0.30	8.19296		114	70 - 130	10.0	20	
Acetone	4.585	0.59	0.26	4.75084		96.5	70 - 130	12.6	20	
Acetonitrile	3.476	0.42	0.14	3.35804		104	70 - 130	7.44	20	
Acrolein	6.581	0.57	0.22	4.58593		144	70 - 130	1.38	20	L5
Acrylonitrile	3.885	0.54	0.18	4.34053		89.5	70 - 130	4.90	20	
Benzene	5.910	0.80	0.28	6.38953		92.5	70 - 130	9.28	20	
Benzyl chloride	10.562	1	0.37	10.3544		102	70 - 130	9.79	20	
Bromobenzene	9.889	2	0.59	12.8432		77.0	70 - 130	1.93	20	
Bromodichloromethane	14.607	2	0.70	13.4011		109	70 - 130	10.0	20	
Bromoform	18.192	3	0.90	20.6733		88.0	70 - 130	5.52	20	
Bromomethane	7.300	0.97	0.46	7.76597		94.0	70 - 130	8.65	20	
Carbon disulfide	5.107	0.78	0.31	6.22847		82.0	70 - 130	1.81	20	
Carbon tetrachloride	13.715	2	0.43	12.5826		109	70 - 130	12.9	20	
Chlorobenzene	7.918	1	0.41	9.20712		86.0	70 - 130	2.87	20	
Chloroethane	5.330	0.66	0.28	5.27722		101	70 - 130	1.47	20	
Chloroform	8.642	1	0.50	9.76499		88.5	70 - 130	7.08	20	
Chloromethane	4.006	0.52	0.22	4.12982		97.0	70 - 130	1.53	20	
cis-1,2-Dichloroethene	5.908	0.99	0.28	7.92990		74.5	70 - 130	0.669	20	
cis-1,3-Dichloropropene	8.669	1	0.33	9.07724		95.5	70 - 130	9.95	20	

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0228 - No_Prep_AIR (continued)										
LCS Dup (B5H0228-BSD1) - Continued					Prepared: 8/10/2015 Analyzed: 8/10/2015					
Cyclohexane	6.747	0.86	0.25	6.88425		98.0	70 - 130	7.37	20	
Dibromochloromethane	15.419	2	0.83	17.0371		90.5	70 - 130	7.96	20	
Dibromomethane	19.907	2	0.55	14.2196		140	70 - 130	1.08	20	L5
Dichlorodifluoromethane	10.237	1	0.56	9.89063		104	70 - 130	0.00	20	
Dichlorotetrafluoroethane	13.702	2	0.76	13.9812		98.0	70 - 130	1.52	20	
Ethanol	4.277	0.47	0.20	3.76834		114	70 - 130	5.15	20	
Ethylbenzene	7.990	1	0.35	8.68425		92.0	70 - 130	4.77	20	
Freon-113	12.798	2	0.58	15.3272		83.5	70 - 130	1.78	20	
Hexachlorobutadiene	16.531	3	1	21.3300		77.5	70 - 130	13.8	20	
Isopropylbenzene	9.094	1	0.52	9.83166		92.5	70 - 130	7.79	20	
m,p-Xylene	33.087	4	1	34.7370		95.2	70 - 130	6.84	20	
Methylene chloride	5.523	0.87	0.31	6.94740		79.5	70 - 130	1.25	20	
MTBE	6.345	0.90	0.33	7.21047		88.0	70 - 130	6.06	20	
n-Butylbenzene	11.802	1	0.42	10.9790		108	70 - 130	6.74	20	
n-Propylbenzene	8.455	1	0.41	9.83166		86.0	70 - 130	5.65	20	
Naphthalene	11.113	1	0.36	10.4843		106	70 - 130	1.87	20	
o-Xylene	8.380	1	0.40	8.68425		96.5	70 - 130	6.52	20	
p-Isopropyltoluene	9.497	1	0.51	10.9790		86.5	70 - 130	6.16	20	
sec-Butylbenzene	11.089	1	0.56	10.9790		101	70 - 130	7.16	20	
Styrene	7.454	1	0.44	8.51934		87.5	70 - 130	4.47	20	
tert-Butylbenzene	10.759	1	0.62	10.9790		98.0	70 - 130	3.02	20	
Tetrachloroethene	11.259	2	0.47	13.5650		83.0	70 - 130	5.85	20	
Toluene	6.821	0.94	0.28	7.53688		90.5	70 - 130	7.45	20	
trans-1,2-Dichloroethene	6.066	0.99	0.34	7.92990		76.5	70 - 130	3.22	20	
trans-1,3-Dichloropropene	9.213	1	0.34	9.07722		102	70 - 130	10.7	20	
Trichloroethene	9.135	1	0.47	10.7474		85.0	70 - 130	5.71	20	
Trichlorofluoromethane	12.473	1	0.53	11.2366		111	70 - 130	12.7	20	
Vinyl acetate	7.253	0.88	0.38	7.04204		103	70 - 130	6.57	20	
Vinyl chloride	4.908	0.64	0.21	5.11231		96.0	70 - 130	2.64	20	
Surrogate: 4-Bromofluorobenzene	*19.11*			*17.8935*		*107*	*79.2 - 147*			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0287 - No_Prep_AIR										
Blank (B5H0287-BLK1)					Prepared: 8/12/2015 Analyzed: 8/12/2015					
2-Propanol	ND	0.61	0.26							
Ethanol	ND	0.47	0.20							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
Surrogate: 4-Bromofluorobenzene	*19.90*			*17.8935*		*111*	*79.2 - 147*			
LCS (B5H0287-BS1)					Prepared: 8/12/2015 Analyzed: 8/12/2015					
2-Propanol	5.505	0.61	0.26	4.91534		112	70 - 130			
Ethanol	4.070	0.47	0.20	3.76834		108	70 - 130			
Tetrachloroethene	13.972	2	0.47	13.5650		103	70 - 130			
Toluene	5.992	0.94	0.28	7.53688		79.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	*19.47*			*17.8935*		*109*	*79.2 - 147*			
LCS Dup (B5H0287-BSD1)					Prepared: 8/12/2015 Analyzed: 8/12/2015					
2-Propanol	5.309	0.61	0.26	4.91534		108	70 - 130	3.64	20	
Ethanol	3.731	0.47	0.20	3.76834		99.0	70 - 130	8.70	20	
Tetrachloroethene	15.125	2	0.47	13.5650		112	70 - 130	7.93	20	
Toluene	6.180	0.94	0.28	7.53688		82.0	70 - 130	3.10	20	
Surrogate: 4-Bromofluorobenzene	*19.90*			*17.8935*		*111*	*79.2 - 147*			

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0364 - No_Prep_AIR										
Blank (B5H0364-BLK1)						Prepared: 8/13/2015 Analyzed: 8/13/2015				
1,1,1-Trichloroethane	ND	1	0.58							
Surrogate: 4-Bromofluorobenzene	*18.54*			*17.8935*		*104*	*79.2 - 147*			
LCS (B5H0364-BS1)						Prepared: 8/13/2015 Analyzed: 8/13/2015				
1,1,1-Trichloroethane	10.367	1	0.58	10.9123		95.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.39*			*17.8935*		*103*	*79.2 - 147*			
LCS Dup (B5H0364-BSD1)						Prepared: 8/13/2015 Analyzed: 8/13/2015				
1,1,1-Trichloroethane	10.039	1	0.58	10.9123		92.0	70 - 130	3.21	20	
Surrogate: 4-Bromofluorobenzene	*18.04*			*17.8935*		*101*	*79.2 - 147*			

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Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0282 - No_Prep_AIR										
Blank (B5H0282-BLK1)						Prepared: 8/12/2015 Analyzed: 8/12/2015				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*18.39*			*17.8935*		*103*	*70 - 130*			
LCS (B5H0282-BS1)						Prepared: 8/12/2015 Analyzed: 8/12/2015				
Gasoline Range Organics	610.920	100	70	817.996		74.7	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*70 - 130*			
LCS Dup (B5H0282-BSD1)						Prepared: 8/12/2015 Analyzed: 8/12/2015				
Gasoline Range Organics	615.501	100	70	817.996		75.2	70 - 130	0.747	20	
Surrogate: 4-Bromofluorobenzene	*18.61*			*17.8935*		*104*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0343 - No_Prep_AIR										
Blank (B5H0343-BLK1)						Prepared: 8/13/2015 Analyzed: 8/13/2015				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*18.18*			*17.8935*		*102*	*70 - 130*			
LCS (B5H0343-BS1)						Prepared: 8/13/2015 Analyzed: 8/13/2015				
Gasoline Range Organics	790.184	100	70	817.996		96.6	70 - 130			
Surrogate: 4-Bromofluorobenzene	*17.82*			*17.8935*		*99.6*	*70 - 130*			
LCS Dup (B5H0343-BSD1)						Prepared: 8/13/2015 Analyzed: 8/13/2015				
Gasoline Range Organics	800.450	100	70	817.996		97.9	70 - 130	1.29	20	
Surrogate: 4-Bromofluorobenzene	*18.82*			*17.8935*		*105*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 33 - 600 S Santa Fe St., Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Notes and Definitions

L5	Laboratory Control Sample high biased. Sample result/s was non-detect (ND) for the target analyte; therefore reanalysis was not necessary.
E4	Result value is estimated.
E3	Internal standard recoveries did not meet method acceptance due to matrix interference. Result value is estimated.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 201307

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☑	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand & Assoc — Address: — Tel:
City: — State: — Zip: — Fax:

SEND REPORT TO:
Attn: Naresh Bellana — Email:
Company: Hushmand & Assoc
Address: 250 Goddard
City: Irvine — State: CA — Zip: 92618

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: — Email:
Company:
Address:
City: — State: — Zip:

PROJECT SAMPLES

Project Name: Santa fe st
Project No.:
Sampler: Don Terres
Quote No:
PO #:
Special Instructions/Comments: ETR# 327 E15G161

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time
1	1502695 - 1	VP-1	8/5	10:41
2	2	VP-2		10:49
3	3	VP-3		10:12
4	4	VP-4		10:28
5	5	VP-5		10:32
6	6	VP-6		10:59
7	7	VP-7		9:17
8	8	VP-8		8:50
9	9	VP-9		9:00
10	10	VP-10		9:10

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; TPH -Gas

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

TAT: 5DT 10DT

Container: # — Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister — Material: 1=Glass; 2=Plastic; 3=Metal — Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (IAc)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltran ☐ Legal ☐ RWQCB ☐ Level IV

REMARKS

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab — ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name — Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	8-5	1:40	C. Hyde C	8/6/15	1342
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130711

Method of Transport		Sample Conditions Upon Receipt					
		Condition	Y	N	Condition	Y	N
☒ Client	☐ ATL	1. CHILLED	☐	☒	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx	☐ OnTrac	2. HEADSPACE (V0A)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
Hushmand & Assoc.	City:	State:	Zip:	Fax:

SEND REPORT TO:		SEND INVOICE TO: ☐ same as SEND REPORT TO	
Attn: Naresh Bellam	Email:	Attn:	Email:
Company: Hushmand & Assoc		Company:	
Address: 250 Goddard		Address:	
City: Irvine CA	State: Zip: 92618	City:	State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Santa fe Street		ETR #327
Project No.:	PO #:	E15G161
Sampler: Don Terres		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	TO #Gas	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container #	Container Type	Container Material	Preservative	QA/QC	REMARKS
1	180645 - 11	VP-11	8/15	9:43	X							/	/							7					
2	12	VP-12		9:50	X							/	/							7					
3																									
4	13	VP-3 Dup		10:21	X							/	/							7					
5	14	VP-9 Dup	↓	9:25	X							/	/							7					
6					OT							OT													
7																									
8																									
9																									
10																									

Encircle or Write Requested Analysis — Encircle Sample Matrix — Container — QA/QC

Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (Ac)2; 6=NaOH; 7=NAZSO3

QA/QC: ☐ Routine ☐ Caltran ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
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   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
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   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	8/15	140	C. Arguilo	8/15	1342
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

Rachelle Arada

From: Naresh Bellana [naresh@haieng.com]
Sent: Monday, August 17, 2015 12:31 PM
To: Rachelle Arada
Subject: RE: Final Results/Invoice - Santa Fe St. (ATL# 1502695)

Rachelle,

Could you change the Client Reference to "Parcel 33 - 600 S Santa Fe St., Los Angeles"?

Thanking you,

Sincerely,

Naresh Bellana, MS, PE
Senior Staff Engineer

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. *(949) 777-1266*
d. *(949) 777-1275*
f. *(949) 777-1276*

From: Rachelle Arada [mailto:Rachelle@atlglobal.com]
Sent: Monday, August 17, 2015 12:07 PM
To: Naresh Bellana
Subject: Final Results/Invoice - Santa Fe St. (ATL# 1502695)

Hi Naresh,

Attached are the results/invoice for the above project.

Rachelle Arada
Project Manager

Advanced Technology Laboratories
www.atlglobal.com
Tel: (562) 989-4045 ext. 237
Fax: (562) 989-4040

March 26, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1502728
Client Reference : Parcel 32

Enclosed are the results for sample(s) received on August 07, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VP-1	1502728-01	Air	8/07/15 12:22	8/07/15 14:47
VP-2	1502728-02	Air	8/07/15 12:28	8/07/15 14:47
VP-3	1502728-03	Air	8/07/15 13:03	8/07/15 14:47
VP-4	1502728-04	Air	8/07/15 13:08	8/07/15 14:47
VP-5	1502728-05	Air	8/07/15 12:32	8/07/15 14:47
VP-6	1502728-06	Air	8/07/15 12:41	8/07/15 14:47
VP-7	1502728-07	Air	8/07/15 12:54	8/07/15 14:47
VP-8	1502728-08	Air	8/07/15 13:16	8/07/15 14:47
VP-9	1502728-09	Air	8/07/15 12:49	8/07/15 14:47
VP-10	1502728-10	Air	8/07/15 12:53	8/07/15 14:47
VP-7 (Duplicate)	1502728-11	Air	8/07/15 13:28	8/07/15 14:47

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-1
Lab ID: 1502728-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,1,1-Trichloroethane	**5**	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,1-Dichloroethane	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/15/2015	08/15/15 23:49	
1,1-Dichloropropene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2,4-Trimethylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2-Dibromoethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2-Dichloroethane	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,2-Dichloropropane	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
1,3-Butadiene	ND	0.55	1	B5H0409	08/15/2015	08/15/15 23:49	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
1,4-Dioxane	ND	0.90	1	B5H0409	08/15/2015	08/15/15 23:49	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
2-Butanone	**9**	0.74	1	B5H0409	08/15/2015	08/15/15 23:49	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
2-Chlorotoluene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
2-Hexanone	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
2-Propanol	**210**	6	10	B5H0409	08/16/2015	08/16/15 10:27	
4-Chlorotoluene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
4-Ethyl Toluene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Acetone	**40**	0.59	1	B5H0409	08/15/2015	08/15/15 23:49	
Acetonitrile	**0.86**	0.42	1	B5H0409	08/15/2015	08/15/15 23:49	
Acrolein	ND	0.57	1	B5H0409	08/15/2015	08/15/15 23:49	
Acrylonitrile	ND	0.54	1	B5H0409	08/15/2015	08/15/15 23:49	
Benzene	**2**	0.80	1	B5H0409	08/15/2015	08/15/15 23:49	
Benzyl chloride	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Bromobenzene	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Bromodichloromethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-1

Lab ID: 1502728-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/15/2015	08/15/15 23:49	
Bromomethane	ND	0.97	1	B5H0409	08/15/2015	08/15/15 23:49	
Carbon disulfide	**1**	0.78	1	B5H0409	08/15/2015	08/15/15 23:49	
Carbon tetrachloride	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Chlorobenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Chloroethane	ND	0.66	1	B5H0409	08/15/2015	08/15/15 23:49	
Chloroform	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Chloromethane	ND	0.52	1	B5H0409	08/15/2015	08/15/15 23:49	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/15/2015	08/15/15 23:49	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Cyclohexane	ND	0.86	1	B5H0409	08/15/2015	08/15/15 23:49	
Dibromochloromethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Dibromomethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Dichlorodifluoromethane	**5**	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Ethanol	**60**	5	10	B5H0409	08/16/2015	08/16/15 10:27	
Ethylbenzene	**1**	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Freon-113	ND	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Hexachlorobutadiene	ND	3	1	B5H0409	08/15/2015	08/15/15 23:49	
Isopropylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
m,p-Xylene	**10**	4	1	B5H0409	08/15/2015	08/15/15 23:49	
Methylene chloride	ND	0.87	1	B5H0409	08/15/2015	08/15/15 23:49	
MTBE	ND	0.90	1	B5H0409	08/15/2015	08/15/15 23:49	
n-Butylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
n-Propylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Naphthalene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
o-Xylene	**2**	1	1	B5H0409	08/15/2015	08/15/15 23:49	
p-Isopropyltoluene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
sec-Butylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Styrene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
tert-Butylbenzene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Tetrachloroethene	**20**	2	1	B5H0409	08/15/2015	08/15/15 23:49	
Toluene	**2**	0.94	1	B5H0409	08/15/2015	08/15/15 23:49	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/15/2015	08/15/15 23:49	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Trichloroethene	ND	1	1	B5H0409	08/15/2015	08/15/15 23:49	
Trichlorofluoromethane	**10**	1	1	B5H0409	08/15/2015	08/15/15 23:49	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-1

Lab ID: 1502728-01

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**1**	0.88	1	B5H0409	08/15/2015	08/15/15 23:49	
Vinyl chloride		**3**	0.64	1	B5H0409	08/15/2015	08/15/15 23:49	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 10:27*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/15/2015	*08/15/15 23:49*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2000**	1000	10	B5H0412	08/16/2015	08/16/15 18:15	
Surrogate: 4-Bromofluorobenzene	*97.2 %*		*70 - 130*		B5H0412	08/16/2015	*08/16/15 18:15*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-2
Lab ID: 1502728-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,1,1-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 00:33	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2,4-Trimethylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 00:33	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 00:33	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
2-Butanone	**0.97**	0.74	1	B5H0409	08/16/2015	08/16/15 00:33	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
2-Propanol	**2200**	30	50	B5H0410	08/16/2015	08/16/15 20:32	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Acetone	**10**	0.59	1	B5H0409	08/16/2015	08/16/15 00:33	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 00:33	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 00:33	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 00:33	
Benzene	**6**	0.80	1	B5H0409	08/16/2015	08/16/15 00:33	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-2
Lab ID: 1502728-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 00:33	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 00:33	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 00:33	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 00:33	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Chloromethane	**0.54**	0.52	1	B5H0409	08/16/2015	08/16/15 00:33	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 00:33	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 00:33	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Dichlorodifluoromethane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Ethanol	**4**	0.47	1	B5H0409	08/16/2015	08/16/15 00:33	
Ethylbenzene	**1**	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 00:33	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
m,p-Xylene	**10**	4	1	B5H0409	08/16/2015	08/16/15 00:33	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 00:33	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 00:33	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Naphthalene	**6**	1	1	B5H0409	08/16/2015	08/16/15 00:33	
o-Xylene	**2**	1	1	B5H0409	08/16/2015	08/16/15 00:33	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Tetrachloroethene	ND	2	1	B5H0409	08/16/2015	08/16/15 00:33	
Toluene	**10**	0.94	1	B5H0409	08/16/2015	08/16/15 00:33	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 00:33	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	
Trichlorofluoromethane	ND	1	1	B5H0409	08/16/2015	08/16/15 00:33	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-2
Lab ID: 1502728-02

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 00:33	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 00:33	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/16/15 20:32*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 00:33*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**3100**	1000	10	B5H0412	08/16/2015	08/16/15 22:15	
Surrogate: 4-Bromofluorobenzene	*94.8 %*		*70 - 130*		B5H0412	08/16/2015	*08/16/15 22:15*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3
Lab ID: 1502728-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,1,1-Trichloroethane	**8**	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 01:17	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2,4-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 01:17	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 01:17	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
2-Butanone	**3**	0.74	1	B5H0409	08/16/2015	08/16/15 01:17	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
2-Propanol	**1100**	30	50	B5H0410	08/16/2015	08/16/15 21:05	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 01:17	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 01:17	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 01:17	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 01:17	
Benzene	ND	0.80	1	B5H0409	08/16/2015	08/16/15 01:17	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3

Lab ID: 1502728-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 01:17	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 01:17	
Carbon disulfide	**3**	0.78	1	B5H0409	08/16/2015	08/16/15 01:17	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 01:17	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 01:17	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 01:17	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 01:17	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Dichlorodifluoromethane	**2**	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Ethanol	**9**	0.47	1	B5H0409	08/16/2015	08/16/15 01:17	
Ethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 01:17	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
m,p-Xylene	ND	4	1	B5H0409	08/16/2015	08/16/15 01:17	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 01:17	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 01:17	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Naphthalene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
o-Xylene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Tetrachloroethene	**10**	2	1	B5H0409	08/16/2015	08/16/15 01:17	
Toluene	**0.94**	0.94	1	B5H0409	08/16/2015	08/16/15 01:17	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 01:17	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 01:17	
Trichlorofluoromethane	**4**	1	1	B5H0409	08/16/2015	08/16/15 01:17	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-3

Lab ID: 1502728-03

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 01:17	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 01:17	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/16/15 21:05*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 01:17*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**4200**	1000	10	B5H0412	08/16/2015	08/16/15 22:50	
Surrogate: 4-Bromofluorobenzene	*96.4 %*		*70 - 130*		B5H0412	08/16/2015	*08/16/15 22:50*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-4

Lab ID: 1502728-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,1,1-Trichloroethane	**5**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 02:01	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2,4-Trichlorobenzene	**3**	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2,4-Trimethylbenzene	**7**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,3,5-Trimethylbenzene	**3**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 02:01	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 02:01	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
2-Butanone	**1**	0.74	1	B5H0409	08/16/2015	08/16/15 02:01	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
2-Propanol	**990**	80	125	B5H0410	08/16/2015	08/17/15 11:20	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
4-Ethyl Toluene	**2**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 02:01	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 02:01	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 02:01	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 02:01	
Benzene	ND	0.80	1	B5H0409	08/16/2015	08/16/15 02:01	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-4
Lab ID: 1502728-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 02:01	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 02:01	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 02:01	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 02:01	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Chloromethane	**0.62**	0.52	1	B5H0409	08/16/2015	08/16/15 02:01	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 02:01	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 02:01	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Dichlorodifluoromethane	**1**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Ethanol	**20**	0.47	1	B5H0409	08/16/2015	08/16/15 02:01	
Ethylbenzene	**10**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 02:01	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
m,p-Xylene	**120**	4	1	B5H0409	08/16/2015	08/16/15 02:01	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 02:01	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 02:01	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Naphthalene	**2**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
o-Xylene	**20**	1	1	B5H0409	08/16/2015	08/16/15 02:01	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Tetrachloroethene	**6**	2	1	B5H0409	08/16/2015	08/16/15 02:01	
Toluene	**280**	9	10	B5H0410	08/16/2015	08/17/15 00:01	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 02:01	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:01	
Trichlorofluoromethane	**1**	1	1	B5H0409	08/16/2015	08/16/15 02:01	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-4

Lab ID: 1502728-04

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 02:01	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 02:01	
Surrogate: 4-Bromofluorobenzene	*111 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 00:01*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 11:20*	
Surrogate: 4-Bromofluorobenzene	*112 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 02:01*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**12000**	1000	10	B5H0412	08/16/2015	08/16/15 23:25	
Surrogate: 4-Bromofluorobenzene	*91.2 %*		*70 - 130*		B5H0412	08/16/2015	*08/16/15 23:25*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-5
Lab ID: 1502728-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,1,1-Trichloroethane	**4**	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 02:42	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2,4-Trimethylbenzene	**1**	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 02:42	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 02:42	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
2-Butanone	**5**	0.74	1	B5H0409	08/16/2015	08/16/15 02:42	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
2-Propanol	**2300**	30	50	B5H0410	08/16/2015	08/16/15 22:14	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Acetone	**30**	0.59	1	B5H0409	08/16/2015	08/16/15 02:42	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 02:42	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 02:42	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 02:42	
Benzene	**1**	0.80	1	B5H0409	08/16/2015	08/16/15 02:42	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-5

Lab ID: 1502728-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 02:42	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 02:42	
Carbon disulfide	**1**	0.78	1	B5H0409	08/16/2015	08/16/15 02:42	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 02:42	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 02:42	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 02:42	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 02:42	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Dichlorodifluoromethane	**7**	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Ethanol	**40**	0.47	1	B5H0409	08/16/2015	08/16/15 02:42	
Ethylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 02:42	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
m,p-Xylene	**10**	4	1	B5H0409	08/16/2015	08/16/15 02:42	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 02:42	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 02:42	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Naphthalene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
o-Xylene	**2**	1	1	B5H0409	08/16/2015	08/16/15 02:42	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Tetrachloroethene	**10**	2	1	B5H0409	08/16/2015	08/16/15 02:42	
Toluene	**4**	0.94	1	B5H0409	08/16/2015	08/16/15 02:42	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 02:42	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 02:42	
Trichlorofluoromethane	**30**	1	1	B5H0409	08/16/2015	08/16/15 02:42	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-5
Lab ID: 1502728-05

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 02:42	
Vinyl chloride		**1**	0.64	1	B5H0409	08/16/2015	08/16/15 02:42	
Surrogate: 4-Bromofluorobenzene	*102 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/16/15 22:14*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 02:42*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**7100**	1000	10	B5H0412	08/16/2015	08/17/15 00:00	
Surrogate: 4-Bromofluorobenzene	*87.6 %*		*70 - 130*		B5H0412	08/16/2015	*08/17/15 00:00*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-6
Lab ID: 1502728-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,1,1-Trichloroethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 03:26	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2,4-Trimethylbenzene	**10**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,3,5-Trimethylbenzene	**3**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 03:26	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 03:26	
2,2,4-Trimethylpentane	**4**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
2-Butanone	**1**	0.74	1	B5H0409	08/16/2015	08/16/15 03:26	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
2-Propanol	**70**	6	10	B5H0409	08/16/2015	08/16/15 11:15	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
4-Ethyl Toluene	**2**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Acetone	**10**	0.59	1	B5H0409	08/16/2015	08/16/15 03:26	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 03:26	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 03:26	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 03:26	
Benzene	**2**	0.80	1	B5H0409	08/16/2015	08/16/15 03:26	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-6

Lab ID: 1502728-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 03:26	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 03:26	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 03:26	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 03:26	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 03:26	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 03:26	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 03:26	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Dichlorodifluoromethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Ethanol	**7**	0.47	1	B5H0409	08/16/2015	08/16/15 03:26	
Ethylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 03:26	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
m,p-Xylene	**20**	4	1	B5H0409	08/16/2015	08/16/15 03:26	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 03:26	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 03:26	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Naphthalene	**3**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
o-Xylene	**4**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
p-Isopropyltoluene	**3**	1	1	B5H0409	08/16/2015	08/16/15 03:26	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Tetrachloroethene	**7**	2	1	B5H0409	08/16/2015	08/16/15 03:26	
Toluene	**8**	0.94	1	B5H0409	08/16/2015	08/16/15 03:26	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 03:26	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 03:26	
Trichlorofluoromethane	**30**	1	1	B5H0409	08/16/2015	08/16/15 03:26	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-6
Lab ID: 1502728-06

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 03:26	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 03:26	
Surrogate: 4-Bromofluorobenzene	*109 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 03:26*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 11:15*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2400**	1000	10	B5H0412	08/16/2015	08/16/15 18:50	
Surrogate: 4-Bromofluorobenzene	*97.2 %*		*70 - 130*		B5H0412	08/16/2015	*08/16/15 18:50*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7

Lab ID: 1502728-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,1,1-Trichloroethane	**6**	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 04:08	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2,4-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 04:08	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 04:08	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
2-Butanone	**3**	0.74	1	B5H0409	08/16/2015	08/16/15 04:08	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
2-Propanol	**70**	6	10	B5H0409	08/16/2015	08/16/15 11:55	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 04:08	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 04:08	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 04:08	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 04:08	
Benzene	**0.93**	0.80	1	B5H0409	08/16/2015	08/16/15 04:08	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7

Lab ID: 1502728-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 04:08	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 04:08	
Carbon disulfide	**7**	0.78	1	B5H0409	08/16/2015	08/16/15 04:08	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 04:08	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 04:08	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 04:08	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Cyclohexane	**0.93**	0.86	1	B5H0409	08/16/2015	08/16/15 04:08	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Dichlorodifluoromethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Ethanol	**20**	0.47	1	B5H0409	08/16/2015	08/16/15 04:08	
Ethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 04:08	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
m,p-Xylene	**7**	4	1	B5H0409	08/16/2015	08/16/15 04:08	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 04:08	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 04:08	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Naphthalene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
o-Xylene	**1**	1	1	B5H0409	08/16/2015	08/16/15 04:08	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Tetrachloroethene	**9**	2	1	B5H0409	08/16/2015	08/16/15 04:08	
Toluene	**2**	0.94	1	B5H0409	08/16/2015	08/16/15 04:08	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 04:08	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:08	
Trichlorofluoromethane	**20**	1	1	B5H0409	08/16/2015	08/16/15 04:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7

Lab ID: 1502728-07

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 04:08	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 04:08	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 04:08*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 11:55*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2700**	1000	10	B5H0412	08/16/2015	08/16/15 19:25	
Surrogate: 4-Bromofluorobenzene	*95.6 %*		*70 - 130*		B5H0412	08/16/2015	*08/16/15 19:25*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-8

Lab ID: 1502728-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,1,1-Trichloroethane	**7**	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 04:50	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2,4-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 04:50	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 04:50	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
2-Butanone	ND	0.74	1	B5H0409	08/16/2015	08/16/15 04:50	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
2-Propanol	**30**	0.61	1	B5H0409	08/16/2015	08/16/15 04:50	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Acetone	**5**	0.59	1	B5H0409	08/16/2015	08/16/15 04:50	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 04:50	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 04:50	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 04:50	
Benzene	ND	0.80	1	B5H0409	08/16/2015	08/16/15 04:50	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-8

Lab ID: 1502728-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 04:50	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 04:50	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 04:50	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 04:50	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 04:50	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 04:50	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 04:50	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Dichlorodifluoromethane	**2**	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Ethanol	**4**	0.47	1	B5H0409	08/16/2015	08/16/15 04:50	
Ethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 04:50	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
m,p-Xylene	ND	4	1	B5H0409	08/16/2015	08/16/15 04:50	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 04:50	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 04:50	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Naphthalene	**1**	1	1	B5H0409	08/16/2015	08/16/15 04:50	
o-Xylene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Tetrachloroethene	**8**	2	1	B5H0409	08/16/2015	08/16/15 04:50	
Toluene	ND	0.94	1	B5H0409	08/16/2015	08/16/15 04:50	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 04:50	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 04:50	
Trichlorofluoromethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 04:50	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-8

Lab ID: 1502728-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 04:50	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 04:50	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 04:50*	

Gasoline Range Organics in Air by TO-3 **Analyst: MFR**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2200**	1000	10	B5H0425	08/17/2015	08/17/15 11:31	
Surrogate: 4-Bromofluorobenzene	*95.2 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 11:31*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9
Lab ID: 1502728-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,1,1-Trichloroethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 05:34	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2,4-Trimethylbenzene	**20**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,3,5-Trimethylbenzene	**7**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 05:34	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 05:34	
2,2,4-Trimethylpentane	**4**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
2-Butanone	**7**	0.74	1	B5H0409	08/16/2015	08/16/15 05:34	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
2-Propanol	**480**	6	10	B5H0409	08/16/2015	08/16/15 13:59	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
4-Ethyl Toluene	**4**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Acetone	**30**	0.59	1	B5H0409	08/16/2015	08/16/15 05:34	
Acetonitrile	**0.71**	0.42	1	B5H0409	08/16/2015	08/16/15 05:34	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 05:34	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 05:34	
Benzene	**4**	0.80	1	B5H0409	08/16/2015	08/16/15 05:34	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9
Lab ID: 1502728-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 05:34	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 05:34	
Carbon disulfide	**2**	0.78	1	B5H0409	08/16/2015	08/16/15 05:34	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 05:34	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Chloromethane	**0.70**	0.52	1	B5H0409	08/16/2015	08/16/15 05:34	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 05:34	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Cyclohexane	**1**	0.86	1	B5H0409	08/16/2015	08/16/15 05:34	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Dichlorodifluoromethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Ethanol	**20**	0.47	1	B5H0409	08/16/2015	08/16/15 05:34	
Ethylbenzene	**5**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 05:34	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
m,p-Xylene	**70**	4	1	B5H0409	08/16/2015	08/16/15 05:34	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 05:34	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 05:34	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Naphthalene	**4**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
o-Xylene	**20**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
p-Isopropyltoluene	**2**	1	1	B5H0409	08/16/2015	08/16/15 05:34	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Tetrachloroethene	**5**	2	1	B5H0409	08/16/2015	08/16/15 05:34	
Toluene	**30**	0.94	1	B5H0409	08/16/2015	08/16/15 05:34	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 05:34	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 05:34	
Trichlorofluoromethane	**9**	1	1	B5H0409	08/16/2015	08/16/15 05:34	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-9

Lab ID: 1502728-09

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**1**	0.88	1	B5H0409	08/16/2015	08/16/15 05:34	
Vinyl chloride		**0.87**	0.64	1	B5H0409	08/16/2015	08/16/15 05:34	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 05:34*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 13:59*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2400**	1000	10	B5H0425	08/17/2015	08/17/15 12:05	
Surrogate: 4-Bromofluorobenzene	*100 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 12:05*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-10

Lab ID: 1502728-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,1,1-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 06:18	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2,4-Trimethylbenzene	**4**	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 06:18	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 06:18	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
2-Butanone	**4**	0.74	1	B5H0409	08/16/2015	08/16/15 06:18	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
2-Propanol	**450**	6	10	B5H0410	08/16/2015	08/16/15 22:49	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
4-Ethyl Toluene	**1**	1	1	B5H0409	08/16/2015	08/16/15 06:18	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 06:18	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 06:18	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 06:18	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 06:18	
Benzene	ND	0.80	1	B5H0409	08/16/2015	08/16/15 06:18	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-10

Lab ID: 1502728-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 06:18	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 06:18	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 06:18	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 06:18	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Chloromethane	**0.74**	0.52	1	B5H0409	08/16/2015	08/16/15 06:18	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 06:18	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 06:18	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Dichlorodifluoromethane	**2**	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Ethanol	**50**	5	10	B5H0410	08/16/2015	08/16/15 22:49	
Ethylbenzene	**20**	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 06:18	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
m,p-Xylene	**150**	4	1	B5H0409	08/16/2015	08/16/15 06:18	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 06:18	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 06:18	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Naphthalene	**2**	1	1	B5H0409	08/16/2015	08/16/15 06:18	
o-Xylene	**30**	1	1	B5H0409	08/16/2015	08/16/15 06:18	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Tetrachloroethene	**2**	2	1	B5H0409	08/16/2015	08/16/15 06:18	
Toluene	**210**	9	10	B5H0410	08/16/2015	08/16/15 22:49	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 06:18	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 06:18	
Trichlorofluoromethane	**2**	1	1	B5H0409	08/16/2015	08/16/15 06:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-10

Lab ID: 1502728-10

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 06:18	
Vinyl chloride		**0.69**	0.64	1	B5H0409	08/16/2015	08/16/15 06:18	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/16/15 22:49*	
Surrogate: 4-Bromofluorobenzene	*113 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 06:18*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**4200**	1000	10	B5H0425	08/17/2015	08/17/15 10:24	
Surrogate: 4-Bromofluorobenzene	*98.4 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 10:24*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7 (Duplicate)
Lab ID: 1502728-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,1,1-Trichloroethane	**6**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 07:02	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2,4-Trimethylbenzene	**20**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,3,5-Trimethylbenzene	**5**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 07:02	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 07:02	
2,2,4-Trimethylpentane	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
2-Butanone	**3**	0.74	1	B5H0409	08/16/2015	08/16/15 07:02	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
2-Propanol	**180**	6	10	B5H0410	08/16/2015	08/16/15 23:24	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
4-Ethyl Toluene	**4**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 07:02	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 07:02	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 07:02	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 07:02	
Benzene	**1**	0.80	1	B5H0409	08/16/2015	08/16/15 07:02	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
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Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7 (Duplicate)
Lab ID: 1502728-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 07:02	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 07:02	
Carbon disulfide	**7**	0.78	1	B5H0409	08/16/2015	08/16/15 07:02	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 07:02	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Chloromethane	**0.62**	0.52	1	B5H0409	08/16/2015	08/16/15 07:02	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 07:02	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Cyclohexane	ND	0.86	1	B5H0409	08/16/2015	08/16/15 07:02	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Dichlorodifluoromethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Ethanol	**60**	5	10	B5H0410	08/16/2015	08/16/15 23:24	
Ethylbenzene	**3**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 07:02	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
m,p-Xylene	**30**	4	1	B5H0409	08/16/2015	08/16/15 07:02	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 07:02	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 07:02	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
n-Propylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Naphthalene	**40**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
o-Xylene	**6**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
p-Isopropyltoluene	**10**	1	1	B5H0409	08/16/2015	08/16/15 07:02	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Tetrachloroethene	**9**	2	1	B5H0409	08/16/2015	08/16/15 07:02	
Toluene	**4**	0.94	1	B5H0409	08/16/2015	08/16/15 07:02	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 07:02	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:02	
Trichlorofluoromethane	**20**	1	1	B5H0409	08/16/2015	08/16/15 07:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
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Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VP-7 (Duplicate)
Lab ID: 1502728-11

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**2**	0.88	1	B5H0409	08/16/2015	08/16/15 07:02	
Vinyl chloride		**1**	0.64	1	B5H0409	08/16/2015	08/16/15 07:02	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/16/15 23:24*	
Surrogate: 4-Bromofluorobenzene	*109 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 07:02*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2100**	1000	10	B5H0425	08/17/2015	08/17/15 10:57	
Surrogate: 4-Bromofluorobenzene	*102 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 10:57*	

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Hushmand Associates, Inc.	Project Number : Parcel 32
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QUALITY CONTROL SECTION

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR										
Blank (B5H0409-BLK1)					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
Blank (B5H0409-BLK1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			
LCS (B5H0409-BS1)					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1,2-Tetrachloroethane	16.888	2	0.57	13.7299		123	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS (B5H0409-BS1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1-Trichloroethane	11.240	1	0.58	10.9123		103	70 - 130			
1,1,2,2-Tetrachloroethane	15.515	2	0.77	13.7299		113	70 - 130			
1,1,2-Trichloroethane	10.967	1	0.45	10.9123		100	70 - 130			
1,1-Dichloroethane	8.095	1	0.37	8.09480		100	70 - 130			
1,1-Dichloroethene	7.851	0.99	0.34	7.92990		99.0	70 - 130			
1,1-Dichloropropene	8.351	1	0.37	9.07722		92.0	70 - 130			
1,2,3-Trichloropropane	10.733	2	0.58	12.0597		89.0	70 - 130			
1,2,4-Trichlorobenzene	14.768	2	0.73	14.8422		99.5	70 - 130			
1,2,4-Trimethylbenzene	11.503	1	0.54	9.83166		117	70 - 130			
1,2-Dibromo-3-chloropropane	27.065	2	1	19.3319		140	70 - 130			L5
1,2-Dibromoethane	15.674	2	0.73	15.3670		102	70 - 130			
1,2-Dichlorobenzene	12.866	2	0.54	12.0246		107	70 - 130			
1,2-Dichloroethane	7.852	1	0.34	8.09480		97.0	70 - 130			
1,2-Dichloropropane	9.196	1	0.41	9.24213		99.5	70 - 130			
1,3,5-Trimethylbenzene	10.815	1	0.51	9.83166		110	70 - 130			
1,3-Butadiene	4.026	0.55	0.39	4.42454		91.0	70 - 130			
1,3-Dichlorobenzene	13.287	2	0.56	12.0246		110	70 - 130			
1,4-Dichlorobenzene	13.047	2	0.51	12.0246		109	70 - 130			
1,4-Dioxane	7.711	0.90	0.65	7.20695		107	70 - 130			
2,2,4-Trimethylpentane	9.437	1	0.35	9.34388		101	70 - 130			
2-Butanone	5.839	0.74	0.24	5.89824		99.0	70 - 130			
2-Chloroethyl vinyl ether	10.241	1	0.22	8.71583		118	70 - 130			
2-Chlorotoluene	11.183	1	0.50	10.3544		108	70 - 130			
2-Hexanone	8.439	1	0.43	8.19296		103	70 - 130			
2-Propanol	4.522	0.61	0.26	4.91534		92.0	70 - 130			
4-Chlorotoluene	8.646	1	0.47	10.3544		83.5	70 - 130			
4-Ethyl Toluene	10.962	1	0.47	9.83166		112	70 - 130			
4-Methyl-2-pentanone	8.234	1	0.30	8.19296		100	70 - 130			
Acetone	4.300	0.59	0.26	4.75084		90.5	70 - 130			
Acetonitrile	3.106	0.42	0.14	3.35804		92.5	70 - 130			
Acrolein	4.059	0.57	0.22	4.58593		88.5	70 - 130			
Acrylonitrile	4.232	0.54	0.18	4.34053		97.5	70 - 130			
Benzene	6.294	0.80	0.28	6.38953		98.5	70 - 130			
Benzyl chloride	12.011	1	0.37	10.3544		116	70 - 130			
Bromobenzene	10.146	2	0.59	12.8432		79.0	70 - 130			
Bromodichloromethane	14.205	2	0.70	13.4011		106	70 - 130			
Bromoform	25.221	3	0.90	20.6733		122	70 - 130			
Bromomethane	7.882	0.97	0.46	7.76597		102	70 - 130			
Carbon disulfide	6.166	0.78	0.31	6.22847		99.0	70 - 130			
Carbon tetrachloride	13.967	2	0.43	12.5826		111	70 - 130			
Chlorobenzene	9.990	1	0.41	9.20712		108	70 - 130			
Chloroethane	5.013	0.66	0.28	5.27722		95.0	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS (B5H0409-BS1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
Chloroform	9.765	1	0.50	9.76499		100	70 - 130			
Chloromethane	3.965	0.52	0.22	4.12982		96.0	70 - 130			
cis-1,2-Dichloroethene	7.811	0.99	0.28	7.92990		98.5	70 - 130			
cis-1,3-Dichloropropene	9.213	1	0.33	9.07724		102	70 - 130			
Cyclohexane	6.781	0.86	0.25	6.88425		98.5	70 - 130			
Dibromochloromethane	20.870	2	0.83	17.0371		122	70 - 130			
Dibromomethane	12.727	2	0.55	14.2196		89.5	70 - 130			
Dichlorodifluoromethane	12.413	1	0.56	9.89063		126	70 - 130			
Dichlorotetrafluoroethane	15.729	2	0.76	13.9812		112	70 - 130			
Ethanol	3.429	0.47	0.20	3.76834		91.0	70 - 130			
Ethylbenzene	9.379	1	0.35	8.68425		108	70 - 130			
Freon-113	15.710	2	0.58	15.3272		102	70 - 130			
Hexachlorobutadiene	15.678	3	1	21.3300		73.5	70 - 130			
Isopropylbenzene	10.864	1	0.52	9.83166		110	70 - 130			
m,p-Xylene	38.384	4	1	34.7370		110	70 - 130			
Methylene chloride	6.843	0.87	0.31	6.94740		98.5	70 - 130			
MTBE	7.210	0.90	0.33	7.21047		100	70 - 130			
n-Butylbenzene	12.461	1	0.42	10.9790		114	70 - 130			
n-Propylbenzene	10.618	1	0.41	9.83166		108	70 - 130			
Naphthalene	10.589	1	0.36	10.4843		101	70 - 130			
o-Xylene	9.466	1	0.40	8.68425		109	70 - 130			
p-Isopropyltoluene	9.991	1	0.51	10.9790		91.0	70 - 130			
sec-Butylbenzene	12.571	1	0.56	10.9790		114	70 - 130			
Styrene	9.073	1	0.44	8.51934		106	70 - 130			
tert-Butylbenzene	12.845	1	0.62	10.9790		117	70 - 130			
Tetrachloroethene	14.447	2	0.47	13.5650		106	70 - 130			
Toluene	7.537	0.94	0.28	7.53688		100	70 - 130			
trans-1,2-Dichloroethene	7.890	0.99	0.34	7.92990		99.5	70 - 130			
trans-1,3-Dichloropropene	9.213	1	0.34	9.07722		102	70 - 130			
Trichloroethene	10.962	1	0.47	10.7474		102	70 - 130			
Trichlorofluoromethane	11.405	1	0.53	11.2366		102	70 - 130			
Vinyl acetate	8.204	0.88	0.38	7.04204		116	70 - 130			
Vinyl chloride	4.985	0.64	0.21	5.11231		97.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.90*			*17.8935*		*106*	*79.2 - 147*			
LCS Dup (B5H0409-BSD1)					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1,2-Tetrachloroethane	16.956	2	0.57	13.7299		124	70 - 130	0.406	20	
1,1,1-Trichloroethane	11.240	1	0.58	10.9123		103	70 - 130	0.00	20	
1,1,2,2-Tetrachloroethane	15.446	2	0.77	13.7299		112	70 - 130	0.443	20	
1,1,2-Trichloroethane	10.858	1	0.45	10.9123		99.5	70 - 130	1.00	20	
1,1-Dichloroethane	8.014	1	0.37	8.09480		99.0	70 - 130	1.01	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS Dup (B5H0409-BSD1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1-Dichloroethene	7.851	0.99	0.34	7.92990		99.0	70 - 130	0.00	20	
1,1-Dichloropropene	7.670	1	0.37	9.07722		84.5	70 - 130	8.50	20	
1,2,3-Trichloropropane	9.949	2	0.58	12.0597		82.5	70 - 130	7.58	20	
1,2,4-Trichlorobenzene	13.284	2	0.73	14.8422		89.5	70 - 130	10.6	20	
1,2,4-Trimethylbenzene	11.356	1	0.54	9.83166		116	70 - 130	1.29	20	
1,2-Dibromo-3-chloropropane	25.325	2	1	19.3319		131	70 - 130	6.64	20	L5
1,2-Dibromoethane	15.597	2	0.73	15.3670		102	70 - 130	0.491	20	
1,2-Dichlorobenzene	12.926	2	0.54	12.0246		108	70 - 130	0.466	20	
1,2-Dichloroethane	7.811	1	0.34	8.09480		96.5	70 - 130	0.517	20	
1,2-Dichloropropane	9.196	1	0.41	9.24213		99.5	70 - 130	0.00	20	
1,3,5-Trimethylbenzene	10.717	1	0.51	9.83166		109	70 - 130	0.913	20	
1,3-Butadiene	4.270	0.55	0.39	4.42454		96.5	70 - 130	5.87	20	
1,3-Dichlorobenzene	13.287	2	0.56	12.0246		110	70 - 130	0.00	20	
1,4-Dichlorobenzene	13.047	2	0.51	12.0246		109	70 - 130	0.00	20	
1,4-Dioxane	7.567	0.90	0.65	7.20695		105	70 - 130	1.89	20	
2,2,4-Trimethylpentane	9.391	1	0.35	9.34388		100	70 - 130	0.496	20	
2-Butanone	5.780	0.74	0.24	5.89824		98.0	70 - 130	1.02	20	
2-Chloroethyl vinyl ether	9.282	1	0.22	8.71583		106	70 - 130	9.82	20	
2-Chlorotoluene	11.235	1	0.50	10.3544		108	70 - 130	0.462	20	
2-Hexanone	8.316	1	0.43	8.19296		102	70 - 130	1.47	20	
2-Propanol	4.891	0.61	0.26	4.91534		99.5	70 - 130	7.83	20	
4-Chlorotoluene	8.128	1	0.47	10.3544		78.5	70 - 130	6.17	20	
4-Ethyl Toluene	10.471	1	0.47	9.83166		106	70 - 130	4.59	20	
4-Methyl-2-pentanone	8.070	1	0.30	8.19296		98.5	70 - 130	2.01	20	
Acetone	4.466	0.59	0.26	4.75084		94.0	70 - 130	3.79	20	
Acetonitrile	3.375	0.42	0.14	3.35804		100	70 - 130	8.29	20	
Acrolein	3.279	0.57	0.22	4.58593		71.5	70 - 130	21.2	20	R
Acrylonitrile	4.189	0.54	0.18	4.34053		96.5	70 - 130	1.03	20	
Benzene	6.230	0.80	0.28	6.38953		97.5	70 - 130	1.02	20	
Benzyl chloride	12.166	1	0.37	10.3544		117	70 - 130	1.28	20	
Bromobenzene	9.440	2	0.59	12.8432		73.5	70 - 130	7.21	20	
Bromodichloromethane	14.071	2	0.70	13.4011		105	70 - 130	0.948	20	
Bromoform	25.015	3	0.90	20.6733		121	70 - 130	0.823	20	
Bromomethane	8.193	0.97	0.46	7.76597		106	70 - 130	3.86	20	
Carbon disulfide	6.135	0.78	0.31	6.22847		98.5	70 - 130	0.506	20	
Carbon tetrachloride	13.904	2	0.43	12.5826		110	70 - 130	0.451	20	
Chlorobenzene	9.990	1	0.41	9.20712		108	70 - 130	0.00	20	
Chloroethane	5.515	0.66	0.28	5.27722		104	70 - 130	9.52	20	
Chloroform	9.619	1	0.50	9.76499		98.5	70 - 130	1.51	20	
Chloromethane	4.171	0.52	0.22	4.12982		101	70 - 130	5.08	20	
cis-1,2-Dichloroethene	7.771	0.99	0.28	7.92990		98.0	70 - 130	0.509	20	
cis-1,3-Dichloropropene	9.077	1	0.33	9.07724		100	70 - 130	1.49	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS Dup (B5H0409-BSD1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
Cyclohexane	6.678	0.86	0.25	6.88425		97.0	70 - 130	1.53	20	
Dibromochloromethane	20.700	2	0.83	17.0371		122	70 - 130	0.820	20	
Dibromomethane	11.944	2	0.55	14.2196		84.0	70 - 130	6.34	20	
Dichlorodifluoromethane	12.561	1	0.56	9.89063		127	70 - 130	1.19	20	
Dichlorotetrafluoroethane	16.148	2	0.76	13.9812		116	70 - 130	2.63	20	
Ethanol	3.655	0.47	0.20	3.76834		97.0	70 - 130	6.38	20	
Ethylbenzene	9.336	1	0.35	8.68425		108	70 - 130	0.464	20	
Freon-113	15.864	2	0.58	15.3272		104	70 - 130	0.971	20	
Hexachlorobutadiene	17.704	3	1	21.3300		83.0	70 - 130	12.1	20	
Isopropylbenzene	10.766	1	0.52	9.83166		110	70 - 130	0.909	20	
m,p-Xylene	38.037	4	1	34.7370		110	70 - 130	0.909	20	
Methylene chloride	6.774	0.87	0.31	6.94740		97.5	70 - 130	1.02	20	
MTBE	7.102	0.90	0.33	7.21047		98.5	70 - 130	1.51	20	
n-Butylbenzene	12.626	1	0.42	10.9790		115	70 - 130	1.31	20	
n-Propylbenzene	10.766	1	0.41	9.83166		110	70 - 130	1.38	20	
Naphthalene	11.323	1	0.36	10.4843		108	70 - 130	6.70	20	
o-Xylene	9.422	1	0.40	8.68425		108	70 - 130	0.460	20	
p-Isopropyltoluene	9.222	1	0.51	10.9790		84.0	70 - 130	8.00	20	
sec-Butylbenzene	12.406	1	0.56	10.9790		113	70 - 130	1.32	20	
Styrene	9.116	1	0.44	8.51934		107	70 - 130	0.468	20	
tert-Butylbenzene	12.681	1	0.62	10.9790		116	70 - 130	1.29	20	
Tetrachloroethene	14.447	2	0.47	13.5650		106	70 - 130	0.00	20	
Toluene	7.499	0.94	0.28	7.53688		99.5	70 - 130	0.501	20	
trans-1,2-Dichloroethene	7.771	0.99	0.34	7.92990		98.0	70 - 130	1.52	20	
trans-1,3-Dichloropropene	9.213	1	0.34	9.07722		102	70 - 130	0.00	20	
Trichloroethene	10.962	1	0.47	10.7474		102	70 - 130	0.00	20	
Trichlorofluoromethane	11.911	1	0.53	11.2366		106	70 - 130	4.34	20	
Vinyl acetate	8.169	0.88	0.38	7.04204		116	70 - 130	0.430	20	
Vinyl chloride	5.215	0.64	0.21	5.11231		102	70 - 130	4.51	20	
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR										
Blank (B5H0410-BLK1)					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
Blank (B5H0410-BLK1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*18.32*			*17.8935*		*102*	*79.2 - 147*			
LCS (B5H0410-BS1)					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,1,2-Tetrachloroethane	16.133	2	0.57	13.7299		118	70 - 130			
1,1,1-Trichloroethane	10.094	1	0.58	10.9123		92.5	70 - 130			
1,1,2,2-Tetrachloroethane	15.377	2	0.77	13.7299		112	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS (B5H0410-BS1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,2-Trichloroethane	11.185	1	0.45	10.9123		102	70 - 130			
1,1-Dichloroethane	7.528	1	0.37	8.09480		93.0	70 - 130			
1,1-Dichloroethene	6.899	0.99	0.34	7.92990		87.0	70 - 130			
1,1-Dichloropropene	8.533	1	0.37	9.07722		94.0	70 - 130			
1,2,3-Trichloropropane	10.974	2	0.58	12.0597		91.0	70 - 130			
1,2,4-Trichlorobenzene	14.545	2	0.73	14.8422		98.0	70 - 130			
1,2,4-Trimethylbenzene	11.257	1	0.54	9.83166		114	70 - 130			
1,2-Dibromo-3-chloropropane	29.674	2	1	19.3319		154	70 - 130			L5
1,2-Dibromoethane	15.367	2	0.73	15.3670		100	70 - 130			
1,2-Dichlorobenzene	12.145	2	0.54	12.0246		101	70 - 130			
1,2-Dichloroethane	8.459	1	0.34	8.09480		104	70 - 130			
1,2-Dichloropropane	9.566	1	0.41	9.24213		104	70 - 130			
1,3,5-Trimethylbenzene	10.274	1	0.51	9.83166		104	70 - 130			
1,3-Butadiene	4.734	0.55	0.39	4.42454		107	70 - 130			
1,3-Dichlorobenzene	12.686	2	0.56	12.0246		106	70 - 130			
1,4-Dichlorobenzene	12.265	2	0.51	12.0246		102	70 - 130			
1,4-Dioxane	7.423	0.90	0.65	7.20695		103	70 - 130			
2,2,4-Trimethylpentane	9.811	1	0.35	9.34388		105	70 - 130			
2-Butanone	5.662	0.74	0.24	5.89824		96.0	70 - 130			
2-Chloroethyl vinyl ether	9.500	1	0.22	8.71583		109	70 - 130			
2-Chlorotoluene	10.820	1	0.50	10.3544		104	70 - 130			
2-Hexanone	8.889	1	0.43	8.19296		108	70 - 130			
2-Propanol	4.620	0.61	0.26	4.91534		94.0	70 - 130			
4-Chlorotoluene	7.973	1	0.47	10.3544		77.0	70 - 130			
4-Ethyl Toluene	10.422	1	0.47	9.83166		106	70 - 130			
4-Methyl-2-pentanone	8.766	1	0.30	8.19296		107	70 - 130			
Acetone	4.941	0.59	0.26	4.75084		104	70 - 130			
Acetonitrile	4.164	0.42	0.14	3.35804		124	70 - 130			
Acrolein	4.563	0.57	0.22	4.58593		99.5	70 - 130			
Acrylonitrile	4.124	0.54	0.18	4.34053		95.0	70 - 130			
Benzene	6.262	0.80	0.28	6.38953		98.0	70 - 130			
Benzyl chloride	11.649	1	0.37	10.3544		112	70 - 130			
Bromobenzene	9.568	2	0.59	12.8432		74.5	70 - 130			
Bromodichloromethane	14.607	2	0.70	13.4011		109	70 - 130			
Bromoform	23.671	3	0.90	20.6733		114	70 - 130			
Bromomethane	8.348	0.97	0.46	7.76597		108	70 - 130			
Carbon disulfide	5.668	0.78	0.31	6.22847		91.0	70 - 130			
Carbon tetrachloride	14.030	2	0.43	12.5826		111	70 - 130			
Chlorobenzene	9.575	1	0.41	9.20712		104	70 - 130			
Chloroethane	5.990	0.66	0.28	5.27722		114	70 - 130			
Chloroform	9.033	1	0.50	9.76499		92.5	70 - 130			
Chloromethane	4.254	0.52	0.22	4.12982		103	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS (B5H0410-BS1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
cis-1,2-Dichloroethene	6.820	0.99	0.28	7.92990		86.0	70 - 130			
cis-1,3-Dichloropropene	9.032	1	0.33	9.07724		99.5	70 - 130			
Cyclohexane	6.884	0.86	0.25	6.88425		100	70 - 130			
Dibromochloromethane	19.508	2	0.83	17.0371		114	70 - 130			
Dibromomethane	13.651	2	0.55	14.2196		96.0	70 - 130			
Dichlorodifluoromethane	11.770	1	0.56	9.89063		119	70 - 130			
Dichlorotetrafluoroethane	15.799	2	0.76	13.9812		113	70 - 130			
Ethanol	4.070	0.47	0.20	3.76834		108	70 - 130			
Ethylbenzene	8.684	1	0.35	8.68425		100	70 - 130			
Freon-113	14.561	2	0.58	15.3272		95.0	70 - 130			
Hexachlorobutadiene	15.144	3	1	21.3300		71.0	70 - 130			
Isopropylbenzene	10.225	1	0.52	9.83166		104	70 - 130			
m,p-Xylene	36.300	4	1	34.7370		104	70 - 130			
Methylene chloride	6.287	0.87	0.31	6.94740		90.5	70 - 130			
MTBE	6.273	0.90	0.33	7.21047		87.0	70 - 130			
n-Butylbenzene	12.626	1	0.42	10.9790		115	70 - 130			
n-Propylbenzene	9.979	1	0.41	9.83166		102	70 - 130			
Naphthalene	10.956	1	0.36	10.4843		104	70 - 130			
o-Xylene	9.075	1	0.40	8.68425		104	70 - 130			
p-Isopropyltoluene	9.607	1	0.51	10.9790		87.5	70 - 130			
sec-Butylbenzene	12.187	1	0.56	10.9790		111	70 - 130			
Styrene	8.221	1	0.44	8.51934		96.5	70 - 130			
tert-Butylbenzene	12.461	1	0.62	10.9790		114	70 - 130			
Tetrachloroethene	13.294	2	0.47	13.5650		98.0	70 - 130			
Toluene	7.311	0.94	0.28	7.53688		97.0	70 - 130			
trans-1,2-Dichloroethene	6.899	0.99	0.34	7.92990		87.0	70 - 130			
trans-1,3-Dichloropropene	9.123	1	0.34	9.07722		100	70 - 130			
Trichloroethene	10.640	1	0.47	10.7474		99.0	70 - 130			
Trichlorofluoromethane	12.248	1	0.53	11.2366		109	70 - 130			
Vinyl acetate	7.711	0.88	0.38	7.04204		110	70 - 130			
Vinyl chloride	5.240	0.64	0.21	5.11231		102	70 - 130			
Surrogate: 4-Bromofluorobenzene	*19.40*			*17.8935*		*108*	*79.2 - 147*			
LCS Dup (B5H0410-BSD1)					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,1,2-Tetrachloroethane	16.476	2	0.57	13.7299		120	70 - 130	2.11	20	
1,1,1-Trichloroethane	10.421	1	0.58	10.9123		95.5	70 - 130	3.19	20	
1,1,2,2-Tetrachloroethane	15.721	2	0.77	13.7299		114	70 - 130	2.21	20	
1,1,2-Trichloroethane	11.512	1	0.45	10.9123		106	70 - 130	2.88	20	
1,1-Dichloroethane	7.771	1	0.37	8.09480		96.0	70 - 130	3.17	20	
1,1-Dichloroethene	7.058	0.99	0.34	7.92990		89.0	70 - 130	2.27	20	
1,1-Dichloropropene	8.124	1	0.37	9.07722		89.5	70 - 130	4.90	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS Dup (B5H0410-BSD1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,2,3-Trichloropropane	10.371	2	0.58	12.0597		86.0	70 - 130	5.65	20	
1,2,4-Trichlorobenzene	12.393	2	0.73	14.8422		83.5	70 - 130	16.0	20	
1,2,4-Trimethylbenzene	11.454	1	0.54	9.83166		116	70 - 130	1.73	20	
1,2-Dibromo-3-chloropropane	27.935	2	1	19.3319		144	70 - 130	6.04	20	L5
1,2-Dibromoethane	15.751	2	0.73	15.3670		102	70 - 130	2.47	20	
1,2-Dichlorobenzene	12.445	2	0.54	12.0246		104	70 - 130	2.44	20	
1,2-Dichloroethane	8.621	1	0.34	8.09480		106	70 - 130	1.90	20	
1,2-Dichloropropane	9.935	1	0.41	9.24213		108	70 - 130	3.79	20	
1,3,5-Trimethylbenzene	10.372	1	0.51	9.83166		106	70 - 130	0.952	20	
1,3-Butadiene	4.734	0.55	0.39	4.42454		107	70 - 130	0.00	20	
1,3-Dichlorobenzene	12.806	2	0.56	12.0246		106	70 - 130	0.943	20	
1,4-Dichlorobenzene	12.385	2	0.51	12.0246		103	70 - 130	0.976	20	
1,4-Dioxane	7.567	0.90	0.65	7.20695		105	70 - 130	1.92	20	
2,2,4-Trimethylpentane	10.185	1	0.35	9.34388		109	70 - 130	3.74	20	
2-Butanone	5.810	0.74	0.24	5.89824		98.5	70 - 130	2.57	20	
2-Chloroethyl vinyl ether	8.977	1	0.22	8.71583		103	70 - 130	5.66	20	
2-Chlorotoluene	10.665	1	0.50	10.3544		103	70 - 130	1.45	20	
2-Hexanone	9.258	1	0.43	8.19296		113	70 - 130	4.06	20	
2-Propanol	5.333	0.61	0.26	4.91534		108	70 - 130	14.3	20	
4-Chlorotoluene	7.248	1	0.47	10.3544		70.0	70 - 130	9.52	20	
4-Ethyl Toluene	10.667	1	0.47	9.83166		108	70 - 130	2.33	20	
4-Methyl-2-pentanone	9.135	1	0.30	8.19296		112	70 - 130	4.12	20	
Acetone	5.036	0.59	0.26	4.75084		106	70 - 130	1.90	20	
Acetonitrile	3.946	0.42	0.14	3.35804		118	70 - 130	5.38	20	
Acrolein	4.104	0.57	0.22	4.58593		89.5	70 - 130	10.6	20	
Acrylonitrile	4.319	0.54	0.18	4.34053		99.5	70 - 130	4.63	20	
Benzene	6.453	0.80	0.28	6.38953		101	70 - 130	3.02	20	
Benzyl chloride	11.959	1	0.37	10.3544		115	70 - 130	2.63	20	
Bromobenzene	10.210	2	0.59	12.8432		79.5	70 - 130	6.49	20	
Bromodichloromethane	15.143	2	0.70	13.4011		113	70 - 130	3.60	20	
Bromoform	24.291	3	0.90	20.6733		118	70 - 130	2.59	20	
Bromomethane	8.387	0.97	0.46	7.76597		108	70 - 130	0.464	20	
Carbon disulfide	5.824	0.78	0.31	6.22847		93.5	70 - 130	2.71	20	
Carbon tetrachloride	14.785	2	0.43	12.5826		118	70 - 130	5.24	20	
Chlorobenzene	9.760	1	0.41	9.20712		106	70 - 130	1.90	20	
Chloroethane	5.990	0.66	0.28	5.27722		114	70 - 130	0.00	20	
Chloroform	9.228	1	0.50	9.76499		94.5	70 - 130	2.14	20	
Chloromethane	4.398	0.52	0.22	4.12982		106	70 - 130	3.34	20	
cis-1,2-Dichloroethene	7.058	0.99	0.28	7.92990		89.0	70 - 130	3.43	20	
cis-1,3-Dichloropropene	9.531	1	0.33	9.07724		105	70 - 130	5.38	20	
Cyclohexane	7.194	0.86	0.25	6.88425		104	70 - 130	4.40	20	
Dibromochloromethane	20.104	2	0.83	17.0371		118	70 - 130	3.01	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS Dup (B5H0410-BSD1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
Dibromomethane	13.082	2	0.55	14.2196		92.0	70 - 130	4.26	20	
Dichlorodifluoromethane	12.462	1	0.56	9.89063		126	70 - 130	5.71	20	
Dichlorotetrafluoroethane	16.148	2	0.76	13.9812		116	70 - 130	2.19	20	
Ethanol	3.994	0.47	0.20	3.76834		106	70 - 130	1.87	20	
Ethylbenzene	8.945	1	0.35	8.68425		103	70 - 130	2.96	20	
Freon-113	14.867	2	0.58	15.3272		97.0	70 - 130	2.08	20	
Hexachlorobutadiene	15.891	3	1	21.3300		74.5	70 - 130	4.81	20	
Isopropylbenzene	10.422	1	0.52	9.83166		106	70 - 130	1.90	20	
m,p-Xylene	37.169	4	1	34.7370		107	70 - 130	2.36	20	
Methylene chloride	6.392	0.87	0.31	6.94740		92.0	70 - 130	1.64	20	
MTBE	6.417	0.90	0.33	7.21047		89.0	70 - 130	2.27	20	
n-Butylbenzene	12.736	1	0.42	10.9790		116	70 - 130	0.866	20	
n-Propylbenzene	10.274	1	0.41	9.83166		104	70 - 130	2.91	20	
Naphthalene	12.686	1	0.36	10.4843		121	70 - 130	14.6	20	
o-Xylene	9.205	1	0.40	8.68425		106	70 - 130	1.43	20	
p-Isopropyltoluene	8.564	1	0.51	10.9790		78.0	70 - 130	11.5	20	
sec-Butylbenzene	12.351	1	0.56	10.9790		112	70 - 130	1.34	20	
Styrene	8.434	1	0.44	8.51934		99.0	70 - 130	2.56	20	
tert-Butylbenzene	12.626	1	0.62	10.9790		115	70 - 130	1.31	20	
Tetrachloroethene	13.836	2	0.47	13.5650		102	70 - 130	4.00	20	
Toluene	7.612	0.94	0.28	7.53688		101	70 - 130	4.04	20	
trans-1,2-Dichloroethene	7.058	0.99	0.34	7.92990		89.0	70 - 130	2.27	20	
trans-1,3-Dichloropropene	9.486	1	0.34	9.07722		104	70 - 130	3.90	20	
Trichloroethene	10.909	1	0.47	10.7474		102	70 - 130	2.49	20	
Trichlorofluoromethane	12.754	1	0.53	11.2366		114	70 - 130	4.04	20	
Vinyl acetate	8.028	0.88	0.38	7.04204		114	70 - 130	4.03	20	
Vinyl chloride	5.393	0.64	0.21	5.11231		106	70 - 130	2.88	20	
Surrogate: 4-Bromofluorobenzene	*19.11*			*17.8935*		*107*	*79.2 - 147*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0412 - No_Prep_AIR										
Blank (B5H0412-BLK1)						Prepared: 8/16/2015 Analyzed: 8/16/2015				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*17.18*			*17.8935*		*96.0*	*70 - 130*			
LCS (B5H0412-BS1)						Prepared: 8/16/2015 Analyzed: 8/16/2015				
Gasoline Range Organics	808.384	100	70	817.996		98.8	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.18*			*17.8935*		*102*	*70 - 130*			
LCS Dup (B5H0412-BSD1)						Prepared: 8/16/2015 Analyzed: 8/16/2015				
Gasoline Range Organics	826.748	100	70	817.996		101	70 - 130	2.25	20	
Surrogate: 4-Bromofluorobenzene	*18.04*			*17.8935*		*101*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0425 - No_Prep_AIR										
Blank (B5H0425-BLK1)						Prepared: 8/17/2015 Analyzed: 8/17/2015				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*17.25*			*17.8935*		*96.4*	*70 - 130*			
LCS (B5H0425-BS1)						Prepared: 8/17/2015 Analyzed: 8/17/2015				
Gasoline Range Organics	839.509	100	70	817.996		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	*17.18*			*17.8935*		*96.0*	*70 - 130*			
LCS Dup (B5H0425-BSD1)						Prepared: 8/17/2015 Analyzed: 8/17/2015				
Gasoline Range Organics	863.395	100	70	817.996		106	70 - 130	2.81	20	
Surrogate: 4-Bromofluorobenzene	*17.75*			*17.8935*		*99.2*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
L5	Laboratory Control Sample high biased. Sample result/s was non-detect (ND) for the target analyte; therefore reanalysis was not necessary.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 2013071

Method of Transport		Sample Conditions Upon Receipt					
		Condition	Y	N	Condition	Y	N
☑ Client	☐ ATL	1. CHILLED N/A	☐	☐	5. # OF SAMPLES MATCH COC	☑	☐
☐ FedEx	☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☑
☐ GSO		3. CONTAINER INTACT	☑	☐	7. COOLER TEMP, deg C:		
☐ Other:		4. SEALED	☐	☑			

CUSTOMER

Company: Hushmand & Assoc. | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: Narek Bellamian | Email:
Company: Hushmand & Assoc
Address: 250 Goddard
City: Irvine | State: CA | Zip: 92618

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: Parcel 32
Project No.:
Sampler: Don Terry
Quote No:
PO #:
Special Instructions/Comments: ETR # 327
E15G161

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	TPH Gas
1	1502728 - 1	VP-1	8/7	12:22								/	/
2	-2	VP-2		12:28								/	/
3	-3	VP-3		1:03								/	/
4	-4	VP-4		1:08								/	/
5	-5	VP-5		12:32								/	/
6	-6	VP-6		12:41								/	/
7	-7	VP-7		12:54								/	/
8	-8	VP-8		1:16								/	/
9	-9	VP-9		12:49								/	/
10	-10	VP-10		12:53								/	/

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE | SOLIDS / WIPE/ FILTER | WATER - DRINKING / GROUND | WATER - STORM / WASTE | AQUEOUS / LAYERED - OIL

TAT

Container: # = 7; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister; Material: 1=Glass; 2=Plastic; 3=Metal

Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

REMARKS

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terry — Submitter Print Name

Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terry	8/7	2:47	ABNER MANGAHAS	8/7/15	14:47

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page ____ of ____

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED 4/-	☐	☐	5. # OF SAMPLES MATCH COC	☑	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☑
☐ GSO	3. CONTAINER INTACT	☑	☐	7. COOLER TEMP, deg C:	—	
☐ Other: ____	4. SEALED	☐	☑			

CUSTOMER

Company:

Address:

Tel:

City: State: Zip:

Fax:

SEND REPORT TO:

Attn: See Page 1 Email:

Company: Hushmand & Assoc

Address:

City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO

Attn: Email:

Company:

Address:

City: State: Zip:

PROJECT SAMPLES

Project Name: Parcel 32

Project No.:

Sampler:

Quote No:

PO #:

Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	TPH Gas	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container #	Container Type	Container Material	Preservative	REMARKS
1	15027K-4	VP-7 (Duplicate)	8/7	1:38								1	1											
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # | Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister | Material: 1=Glass; 2=Plastic; 3=Metal

Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
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   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name

Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	8/7	2:47	ABDUL MAHMUDULLAH	8/7/15	14:47
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

March 26, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1502794

Client Reference : Parcel 22 - 637 S Clarence St, Los Angeles

Enclosed are the results for sample(s) received on August 13, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

for

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
637 CS VP-1	1502794-01	Air	8/13/15 10:00	8/13/15 10:25
637 CS VP-2	1502794-02	Air	8/13/15 10:07	8/13/15 10:25
637 CS VP-3	1502794-03	Air	8/13/15 10:11	8/13/15 10:25
637 CS VP-4	1502794-04	Air	8/13/15 10:25	8/13/15 10:25
637 CS VP-5	1502794-05	Air	8/13/15 10:19	8/13/15 10:25
637 CS VP-6	1502794-06	Air	8/13/15 10:27	8/13/15 10:25
637 CS VP-7	1502794-07	Air	8/13/15 10:43	8/13/15 10:25
637 CS VP-8	1502794-08	Air	8/13/15 10:33	8/13/15 10:25
637 CS VP-9	1502794-09	Air	8/13/15 10:30	8/13/15 10:25
637 CS VP-10	1502794-10	Air	8/13/15 10:46	8/13/15 10:25
637 CS VP-11	1502794-11	Air	8/13/15 10:48	8/13/15 10:25
637 CS VP-12	1502794-12	Air	8/13/15 10:51	8/13/15 10:25
637 CS VP-6 Dubl.	1502794-13	Air	8/13/15 11:00	8/13/15 10:25

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-1
Lab ID: 1502794-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,1,1-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 07:44	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2,4-Trimethylbenzene	**3**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 07:44	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 07:44	
2,2,4-Trimethylpentane	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
2-Butanone	**1**	0.74	1	B5H0409	08/16/2015	08/16/15 07:44	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
2-Propanol	**5100**	80	125	B5H0463	08/17/2015	08/17/15 20:15	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 07:44	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 07:44	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 07:44	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 07:44	
Benzene	**2**	0.80	1	B5H0409	08/16/2015	08/16/15 07:44	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-1
Lab ID: 1502794-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 07:44	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 07:44	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 07:44	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 07:44	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 07:44	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 07:44	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Cyclohexane	**1**	0.86	1	B5H0409	08/16/2015	08/16/15 07:44	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Dichlorodifluoromethane	**7**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Ethanol	**10**	0.47	1	B5H0409	08/16/2015	08/16/15 07:44	
Ethylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 07:44	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
m,p-Xylene	**10**	4	1	B5H0409	08/16/2015	08/16/15 07:44	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 07:44	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 07:44	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Naphthalene	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
o-Xylene	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Tetrachloroethene	**70**	2	1	B5H0409	08/16/2015	08/16/15 07:44	
Toluene	**7**	0.94	1	B5H0409	08/16/2015	08/16/15 07:44	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 07:44	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Trichloroethene	**2**	1	1	B5H0409	08/16/2015	08/16/15 07:44	
Trichlorofluoromethane	**60**	1	1	B5H0409	08/16/2015	08/16/15 07:44	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-1
Lab ID: 1502794-01

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 07:44	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 07:44	
Surrogate: 4-Bromofluorobenzene	*103 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 20:15*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 07:44*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**6100**	1000	10	B5H0425	08/17/2015	08/17/15 23:44	
Surrogate: 4-Bromofluorobenzene	*92.8 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 23:44*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-2
Lab ID: 1502794-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,1,1-Trichloroethane	**3**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 08:25	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2,4-Trimethylbenzene	**10**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,3,5-Trimethylbenzene	**3**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 08:25	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 08:25	
2,2,4-Trimethylpentane	**6**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
2-Butanone	**2**	0.74	1	B5H0409	08/16/2015	08/16/15 08:25	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
2-Hexanone	**2**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
2-Propanol	**2400**	60	100	B5H0464	08/17/2015	08/18/15 11:49	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
4-Ethyl Toluene	**3**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 08:25	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 08:25	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 08:25	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 08:25	
Benzene	**2**	0.80	1	B5H0409	08/16/2015	08/16/15 08:25	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-2
Lab ID: 1502794-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 08:25	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 08:25	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 08:25	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 08:25	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 08:25	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 08:25	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Cyclohexane	**1**	0.86	1	B5H0409	08/16/2015	08/16/15 08:25	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Dichlorodifluoromethane	**10**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Ethanol	**10**	0.47	1	B5H0409	08/16/2015	08/16/15 08:25	
Ethylbenzene	**3**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 08:25	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
m,p-Xylene	**20**	4	1	B5H0409	08/16/2015	08/16/15 08:25	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 08:25	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 08:25	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
n-Propylbenzene	**1**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Naphthalene	**10**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
o-Xylene	**5**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
p-Isopropyltoluene	**4**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Styrene	**1**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
tert-Butylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Tetrachloroethene	**120**	2	1	B5H0409	08/16/2015	08/16/15 08:25	
Toluene	**8**	0.94	1	B5H0409	08/16/2015	08/16/15 08:25	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 08:25	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Trichloroethene	**1**	1	1	B5H0409	08/16/2015	08/16/15 08:25	
Trichlorofluoromethane	**140**	10	10	B5H0463	08/17/2015	08/17/15 20:51	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-2
Lab ID: 1502794-02

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**1**	0.88	1	B5H0409	08/16/2015	08/16/15 08:25	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 08:25	
Surrogate: 4-Bromofluorobenzene	*103 %*		*79.2 - 147*		B5H0464	08/17/2015	*08/18/15 11:49*	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 20:51*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 08:25*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**4900**	1000	10	B5H0425	08/17/2015	08/17/15 16:18	
Surrogate: 4-Bromofluorobenzene	*96.8 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 16:18*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-3
Lab ID: 1502794-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,1,1-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,1,2-Trichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,1-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,1-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 09:09	
1,1-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2,3-Trichloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2,4-Trichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2,4-Trimethylbenzene	**2**	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2-Dibromoethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2-Dichloroethane	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,2-Dichloropropane	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,3,5-Trimethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
1,3-Butadiene	ND	0.55	1	B5H0409	08/16/2015	08/16/15 09:09	
1,3-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,4-Dichlorobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
1,4-Dioxane	ND	0.90	1	B5H0409	08/16/2015	08/16/15 09:09	
2,2,4-Trimethylpentane	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
2-Butanone	**2**	0.74	1	B5H0409	08/16/2015	08/16/15 09:09	
2-Chloroethyl vinyl ether	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
2-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
2-Hexanone	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
2-Propanol	**1500**	60	100	B5H0463	08/17/2015	08/17/15 21:24	
4-Chlorotoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
4-Ethyl Toluene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
4-Methyl-2-pentanone	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Acetone	**20**	0.59	1	B5H0409	08/16/2015	08/16/15 09:09	
Acetonitrile	ND	0.42	1	B5H0409	08/16/2015	08/16/15 09:09	
Acrolein	ND	0.57	1	B5H0409	08/16/2015	08/16/15 09:09	
Acrylonitrile	ND	0.54	1	B5H0409	08/16/2015	08/16/15 09:09	
Benzene	ND	0.80	1	B5H0409	08/16/2015	08/16/15 09:09	
Benzyl chloride	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Bromobenzene	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Bromodichloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-3
Lab ID: 1502794-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0409	08/16/2015	08/16/15 09:09	
Bromomethane	ND	0.97	1	B5H0409	08/16/2015	08/16/15 09:09	
Carbon disulfide	ND	0.78	1	B5H0409	08/16/2015	08/16/15 09:09	
Carbon tetrachloride	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Chlorobenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Chloroethane	ND	0.66	1	B5H0409	08/16/2015	08/16/15 09:09	
Chloroform	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Chloromethane	ND	0.52	1	B5H0409	08/16/2015	08/16/15 09:09	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 09:09	
cis-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Cyclohexane	**0.86**	0.86	1	B5H0409	08/16/2015	08/16/15 09:09	
Dibromochloromethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Dibromomethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Dichlorodifluoromethane	**6**	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Dichlorotetrafluoroethane	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Ethanol	**7**	0.47	1	B5H0409	08/16/2015	08/16/15 09:09	
Ethylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Freon-113	ND	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Hexachlorobutadiene	ND	3	1	B5H0409	08/16/2015	08/16/15 09:09	
Isopropylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
m,p-Xylene	**6**	4	1	B5H0409	08/16/2015	08/16/15 09:09	
Methylene chloride	ND	0.87	1	B5H0409	08/16/2015	08/16/15 09:09	
MTBE	ND	0.90	1	B5H0409	08/16/2015	08/16/15 09:09	
n-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
n-Propylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Naphthalene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
o-Xylene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
p-Isopropyltoluene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
sec-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Styrene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
tert-Butylbenzene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Tetrachloroethene	**80**	2	1	B5H0409	08/16/2015	08/16/15 09:09	
Toluene	**3**	0.94	1	B5H0409	08/16/2015	08/16/15 09:09	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0409	08/16/2015	08/16/15 09:09	
trans-1,3-Dichloropropene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Trichloroethene	ND	1	1	B5H0409	08/16/2015	08/16/15 09:09	
Trichlorofluoromethane	**150**	10	10	B5H0463	08/17/2015	08/18/15 02:36	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-3
Lab ID: 1502794-03

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0409	08/16/2015	08/16/15 09:09	
Vinyl chloride		ND	0.64	1	B5H0409	08/16/2015	08/16/15 09:09	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 21:24*	
Surrogate: 4-Bromofluorobenzene	*103 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 02:36*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0409	08/16/2015	*08/16/15 09:09*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5600**	1000	10	B5H0425	08/17/2015	08/17/15 16:52	
Surrogate: 4-Bromofluorobenzene	*98.0 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 16:52*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-4
Lab ID: 1502794-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,1,1-Trichloroethane	**3**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 00:40	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2,4-Trimethylbenzene	**7**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,3,5-Trimethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 00:40	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 00:40	
2,2,4-Trimethylpentane	**4**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
2-Butanone	**0.94**	0.74	1	B5H0410	08/16/2015	08/17/15 00:40	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
2-Propanol	**2000**	60	100	B5H0463	08/17/2015	08/17/15 21:57	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
4-Ethyl Toluene	**2**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Acetone	**30**	0.59	1	B5H0410	08/16/2015	08/17/15 00:40	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 00:40	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 00:40	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 00:40	
Benzene	**3**	0.80	1	B5H0410	08/16/2015	08/17/15 00:40	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-4
Lab ID: 1502794-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 00:40	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 00:40	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 00:40	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 00:40	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 00:40	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 00:40	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Cyclohexane	**0.96**	0.86	1	B5H0410	08/16/2015	08/17/15 00:40	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
Dichlorodifluoromethane	**10**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
Ethanol	**5**	0.47	1	B5H0410	08/16/2015	08/17/15 00:40	
Ethylbenzene	**3**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 00:40	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 00:40	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
m,p-Xylene	**30**	4	1	B5H0410	08/16/2015	08/17/15 00:40	
Methylene chloride	**1**	0.87	1	B5H0410	08/16/2015	08/17/15 00:40	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 00:40	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Naphthalene	**3**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
o-Xylene	**6**	1	1	B5H0410	08/16/2015	08/17/15 00:40	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Tetrachloroethene	**120**	20	10	B5H0463	08/17/2015	08/18/15 03:12	
Toluene	**20**	0.94	1	B5H0410	08/16/2015	08/17/15 00:40	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 00:40	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 00:40	
Trichlorofluoromethane	**90**	1	1	B5H0410	08/16/2015	08/17/15 00:40	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-4
Lab ID: 1502794-04

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 00:40	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 00:40	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 21:57*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 03:12*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 00:40*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5200**	1000	10	B5H0425	08/17/2015	08/17/15 17:26	
Surrogate: 4-Bromofluorobenzene	*96.4 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 17:26*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-5
Lab ID: 1502794-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,1,1-Trichloroethane	**30**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 01:19	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2,4-Trichlorobenzene	**2**	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2,4-Trimethylbenzene	**4**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,3,5-Trimethylbenzene	**1**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 01:19	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 01:19	
2,2,4-Trimethylpentane	**3**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
2-Butanone	**10**	0.74	1	B5H0410	08/16/2015	08/17/15 01:19	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
2-Propanol	**3600**	60	100	B5H0463	08/17/2015	08/17/15 22:32	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
4-Ethyl Toluene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Acetone	**370**	6	10	B5H0463	08/17/2015	08/18/15 03:51	
Acetonitrile	**1**	0.42	1	B5H0410	08/16/2015	08/17/15 01:19	
Acrolein	**7**	0.57	1	B5H0410	08/16/2015	08/17/15 01:19	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 01:19	
Benzene	**4**	0.80	1	B5H0410	08/16/2015	08/17/15 01:19	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-5
Lab ID: 1502794-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 01:19	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 01:19	
Carbon disulfide	**3**	0.78	1	B5H0410	08/16/2015	08/17/15 01:19	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 01:19	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 01:19	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 01:19	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Cyclohexane	**2**	0.86	1	B5H0410	08/16/2015	08/17/15 01:19	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Dichlorodifluoromethane	**7**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Ethanol	**60**	5	10	B5H0463	08/17/2015	08/18/15 03:51	
Ethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 01:19	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
m,p-Xylene	**20**	4	1	B5H0410	08/16/2015	08/17/15 01:19	
Methylene chloride	**0.97**	0.87	1	B5H0410	08/16/2015	08/17/15 01:19	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 01:19	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Naphthalene	**5**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
o-Xylene	**3**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
p-Isopropyltoluene	**7**	1	1	B5H0410	08/16/2015	08/17/15 01:19	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Tetrachloroethene	**6**	2	1	B5H0410	08/16/2015	08/17/15 01:19	
Toluene	**10**	0.94	1	B5H0410	08/16/2015	08/17/15 01:19	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 01:19	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 01:19	
Trichlorofluoromethane	**80**	1	1	B5H0410	08/16/2015	08/17/15 01:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-5
Lab ID: 1502794-05

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**6**	0.88	1	B5H0410	08/16/2015	08/17/15 01:19	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 01:19	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 03:51*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 22:32*	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 01:19*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**7700**	1000	10	B5H0425	08/17/2015	08/17/15 18:00	
Surrogate: 4-Bromofluorobenzene	*96.0 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 18:00*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-6
Lab ID: 1502794-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,1,1-Trichloroethane	**5**	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 02:00	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2,4-Trimethylbenzene	**1**	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,3,5-Trimethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 02:00	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 02:00	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
2-Butanone	**1**	0.74	1	B5H0410	08/16/2015	08/17/15 02:00	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
2-Propanol	**2000**	60	100	B5H0463	08/17/2015	08/17/15 23:07	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
4-Ethyl Toluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Acetone	**20**	0.59	1	B5H0410	08/16/2015	08/17/15 02:00	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 02:00	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 02:00	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 02:00	
Benzene	ND	0.80	1	B5H0410	08/16/2015	08/17/15 02:00	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-6
Lab ID: 1502794-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 02:00	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 02:00	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 02:00	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 02:00	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 02:00	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 02:00	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Cyclohexane	ND	0.86	1	B5H0410	08/16/2015	08/17/15 02:00	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
Dichlorodifluoromethane	**10**	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
Ethanol	**6**	0.47	1	B5H0410	08/16/2015	08/17/15 02:00	
Ethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 02:00	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 02:00	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
m,p-Xylene	**5**	4	1	B5H0410	08/16/2015	08/17/15 02:00	
Methylene chloride	ND	0.87	1	B5H0410	08/16/2015	08/17/15 02:00	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 02:00	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Naphthalene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
o-Xylene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Tetrachloroethene	**230**	20	10	B5H0463	08/17/2015	08/18/15 04:29	
Toluene	**3**	0.94	1	B5H0410	08/16/2015	08/17/15 02:00	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 02:00	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:00	
Trichlorofluoromethane	**300**	10	10	B5H0463	08/17/2015	08/18/15 04:29	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-6
Lab ID: 1502794-06

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 02:00	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 02:00	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 04:29*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 23:07*	
Surrogate: 4-Bromofluorobenzene	*109 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 02:00*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**6500**	1000	10	B5H0425	08/17/2015	08/17/15 20:51	
Surrogate: 4-Bromofluorobenzene	*99.2 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 20:51*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-7
Lab ID: 1502794-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,1,1-Trichloroethane	**3**	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 02:40	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2,4-Trimethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,3,5-Trimethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 02:40	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 02:40	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
2-Butanone	**1**	0.74	1	B5H0410	08/16/2015	08/17/15 02:40	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
2-Propanol	**1500**	60	100	B5H0463	08/17/2015	08/17/15 23:43	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
4-Ethyl Toluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Acetone	**20**	0.59	1	B5H0410	08/16/2015	08/17/15 02:40	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 02:40	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 02:40	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 02:40	
Benzene	ND	0.80	1	B5H0410	08/16/2015	08/17/15 02:40	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-7
Lab ID: 1502794-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 02:40	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 02:40	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 02:40	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 02:40	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 02:40	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 02:40	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Cyclohexane	ND	0.86	1	B5H0410	08/16/2015	08/17/15 02:40	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
Dichlorodifluoromethane	**7**	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
Ethanol	**3**	0.47	1	B5H0410	08/16/2015	08/17/15 02:40	
Ethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 02:40	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 02:40	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
m,p-Xylene	**6**	4	1	B5H0410	08/16/2015	08/17/15 02:40	
Methylene chloride	ND	0.87	1	B5H0410	08/16/2015	08/17/15 02:40	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 02:40	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Naphthalene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
o-Xylene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Tetrachloroethene	**180**	20	10	B5H0463	08/17/2015	08/18/15 05:11	
Toluene	**3**	0.94	1	B5H0410	08/16/2015	08/17/15 02:40	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 02:40	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 02:40	
Trichlorofluoromethane	**50**	1	1	B5H0410	08/16/2015	08/17/15 02:40	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-7
Lab ID: 1502794-07

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 02:40	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 02:40	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 02:40*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 05:11*	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 23:43*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5100**	1000	10	B5H0425	08/17/2015	08/17/15 21:26	
Surrogate: 4-Bromofluorobenzene	*90.4 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 21:26*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-8
Lab ID: 1502794-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,1,1-Trichloroethane	**5**	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 03:21	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2,4-Trimethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,3,5-Trimethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 03:21	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 03:21	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
2-Butanone	**8**	0.74	1	B5H0410	08/16/2015	08/17/15 03:21	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
2-Propanol	**2800**	60	100	B5H0463	08/17/2015	08/18/15 00:18	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
4-Ethyl Toluene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Acetone	**80**	6	10	B5H0463	08/17/2015	08/18/15 05:56	
Acetonitrile	**0.65**	0.42	1	B5H0410	08/16/2015	08/17/15 03:21	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 03:21	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 03:21	
Benzene	**2**	0.80	1	B5H0410	08/16/2015	08/17/15 03:21	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-8
Lab ID: 1502794-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 03:21	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 03:21	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 03:21	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 03:21	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 03:21	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 03:21	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Cyclohexane	**1**	0.86	1	B5H0410	08/16/2015	08/17/15 03:21	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
Dichlorodifluoromethane	**7**	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
Ethanol	**4**	0.47	1	B5H0410	08/16/2015	08/17/15 03:21	
Ethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 03:21	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 03:21	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
m,p-Xylene	**6**	4	1	B5H0410	08/16/2015	08/17/15 03:21	
Methylene chloride	**1**	0.87	1	B5H0410	08/16/2015	08/17/15 03:21	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 03:21	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Naphthalene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
o-Xylene	**1**	1	1	B5H0410	08/16/2015	08/17/15 03:21	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Tetrachloroethene	**160**	20	10	B5H0463	08/17/2015	08/18/15 05:56	
Toluene	**4**	0.94	1	B5H0410	08/16/2015	08/17/15 03:21	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 03:21	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 03:21	
Trichlorofluoromethane	**100**	1	1	B5H0410	08/16/2015	08/17/15 03:21	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-8
Lab ID: 1502794-08

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**1**	0.88	1	B5H0410	08/16/2015	08/17/15 03:21	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 03:21	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 05:56*	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 00:18*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 03:21*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**6100**	1000	10	B5H0425	08/17/2015	08/17/15 22:00	
Surrogate: 4-Bromofluorobenzene	*91.2 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 22:00*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-9
Lab ID: 1502794-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,1,1-Trichloroethane	**4**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 04:02	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2,4-Trimethylbenzene	**10**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,3,5-Trimethylbenzene	**3**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 04:02	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 04:02	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
2-Butanone	**1**	0.74	1	B5H0410	08/16/2015	08/17/15 04:02	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
2-Propanol	**1800**	60	100	B5H0463	08/17/2015	08/18/15 00:51	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
4-Ethyl Toluene	**2**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Acetone	**20**	0.59	1	B5H0410	08/16/2015	08/17/15 04:02	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 04:02	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 04:02	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 04:02	
Benzene	ND	0.80	1	B5H0410	08/16/2015	08/17/15 04:02	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-9
Lab ID: 1502794-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 04:02	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 04:02	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 04:02	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 04:02	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 04:02	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 04:02	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Cyclohexane	**0.86**	0.86	1	B5H0410	08/16/2015	08/17/15 04:02	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
Dichlorodifluoromethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
Ethanol	**4**	0.47	1	B5H0410	08/16/2015	08/17/15 04:02	
Ethylbenzene	**1**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 04:02	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 04:02	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
m,p-Xylene	**10**	4	1	B5H0410	08/16/2015	08/17/15 04:02	
Methylene chloride	ND	0.87	1	B5H0410	08/16/2015	08/17/15 04:02	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 04:02	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Naphthalene	**3**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
o-Xylene	**3**	1	1	B5H0410	08/16/2015	08/17/15 04:02	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Tetrachloroethene	**270**	20	10	B5H0463	08/17/2015	08/18/15 06:39	
Toluene	**3**	0.94	1	B5H0410	08/16/2015	08/17/15 04:02	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 04:02	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:02	
Trichlorofluoromethane	**170**	10	10	B5H0463	08/17/2015	08/18/15 06:39	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-9
Lab ID: 1502794-09

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 04:02	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 04:02	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 00:51*	
Surrogate: 4-Bromofluorobenzene	*102 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 06:39*	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 04:02*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5800**	1000	10	B5H0425	08/17/2015	08/17/15 22:34	
Surrogate: 4-Bromofluorobenzene	*96.4 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 22:34*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-10
Lab ID: 1502794-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,1,1-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 04:47	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2,4-Trimethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,3,5-Trimethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
1,3-Butadiene	**3**	0.55	1	B5H0410	08/16/2015	08/17/15 04:47	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 04:47	
2,2,4-Trimethylpentane	**4**	1	1	B5H0410	08/16/2015	08/17/15 04:47	
2-Butanone	**2**	0.74	1	B5H0410	08/16/2015	08/17/15 04:47	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
2-Propanol	**2000**	60	100	B5H0464	08/17/2015	08/18/15 22:45	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
4-Ethyl Toluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Acetone	**40**	6	10	B5H0463	08/17/2015	08/18/15 01:25	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 04:47	
Acrolein	**2**	0.57	1	B5H0410	08/16/2015	08/17/15 04:47	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 04:47	
Benzene	**4**	0.80	1	B5H0410	08/16/2015	08/17/15 04:47	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-10
Lab ID: 1502794-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 04:47	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 04:47	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 04:47	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 04:47	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Chloromethane	**0.66**	0.52	1	B5H0410	08/16/2015	08/17/15 04:47	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 04:47	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Cyclohexane	**2**	0.86	1	B5H0410	08/16/2015	08/17/15 04:47	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Dichlorodifluoromethane	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Ethanol	**20**	0.47	1	B5H0410	08/16/2015	08/17/15 04:47	
Ethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 04:47	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
m,p-Xylene	**10**	4	1	B5H0410	08/16/2015	08/17/15 04:47	
Methylene chloride	**2**	0.87	1	B5H0410	08/16/2015	08/17/15 04:47	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 04:47	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Naphthalene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
o-Xylene	**2**	1	1	B5H0410	08/16/2015	08/17/15 04:47	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Tetrachloroethene	**2**	2	1	B5H0410	08/16/2015	08/17/15 04:47	
Toluene	**10**	0.94	1	B5H0410	08/16/2015	08/17/15 04:47	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 04:47	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 04:47	
Trichlorofluoromethane	**3**	1	1	B5H0410	08/16/2015	08/17/15 04:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-10
Lab ID: 1502794-10

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		**2**	0.88	1	B5H0410	08/16/2015	08/17/15 04:47	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 04:47	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 01:25*	
Surrogate: 4-Bromofluorobenzene	*99.6 %*		*79.2 - 147*		B5H0464	08/17/2015	*08/18/15 22:45*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 04:47*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**3600**	1000	10	B5H0465	08/18/2015	08/18/15 10:34	
Surrogate: 4-Bromofluorobenzene	*98.4 %*		*70 - 130*		B5H0465	08/18/2015	*08/18/15 10:34*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-11
Lab ID: 1502794-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,1,1-Trichloroethane	**3**	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 05:30	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2,4-Trimethylbenzene	**4**	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,3,5-Trimethylbenzene	**1**	1	1	B5H0410	08/16/2015	08/17/15 05:30	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 05:30	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 05:30	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
2-Butanone	**2**	0.74	1	B5H0410	08/16/2015	08/17/15 05:30	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
2-Propanol	**1800**	60	100	B5H0464	08/17/2015	08/18/15 23:26	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
4-Ethyl Toluene	**1**	1	1	B5H0410	08/16/2015	08/17/15 05:30	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Acetone	**20**	0.59	1	B5H0410	08/16/2015	08/17/15 05:30	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 05:30	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 05:30	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 05:30	
Benzene	**2**	0.80	1	B5H0410	08/16/2015	08/17/15 05:30	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-11
Lab ID: 1502794-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 05:30	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 05:30	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 05:30	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 05:30	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 05:30	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 05:30	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Cyclohexane	ND	0.86	1	B5H0410	08/16/2015	08/17/15 05:30	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
Dichlorodifluoromethane	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
Ethanol	**2**	0.47	1	B5H0410	08/16/2015	08/17/15 05:30	
Ethylbenzene	**2**	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 05:30	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 05:30	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
m,p-Xylene	**20**	4	1	B5H0410	08/16/2015	08/17/15 05:30	
Methylene chloride	ND	0.87	1	B5H0410	08/16/2015	08/17/15 05:30	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 05:30	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Naphthalene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
o-Xylene	**4**	1	1	B5H0410	08/16/2015	08/17/15 05:30	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Tetrachloroethene	**180**	20	10	B5H0463	08/17/2015	08/18/15 02:00	
Toluene	**20**	0.94	1	B5H0410	08/16/2015	08/17/15 05:30	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 05:30	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 05:30	
Trichlorofluoromethane	**40**	1	1	B5H0410	08/16/2015	08/17/15 05:30	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-11
Lab ID: 1502794-11

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 05:30	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 05:30	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/18/15 02:00*	
Surrogate: 4-Bromofluorobenzene	*99.6 %*		*79.2 - 147*		B5H0464	08/17/2015	*08/18/15 23:26*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 05:30*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**9000**	1000	10	B5H0465	08/17/2015	08/18/15 15:32	
Surrogate: 4-Bromofluorobenzene	*96.4 %*		*70 - 130*		B5H0465	08/17/2015	*08/18/15 15:32*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-12
Lab ID: 1502794-12

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,1,1-Trichloroethane	**2**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 10:05	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2,4-Trichlorobenzene	**2**	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2,4-Trimethylbenzene	**10**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,3,5-Trimethylbenzene	**3**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 10:05	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 10:05	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
2-Butanone	**1**	0.74	1	B5H0410	08/16/2015	08/17/15 10:05	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
2-Propanol	**2800**	60	100	B5H0464	08/17/2015	08/19/15 00:07	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
4-Ethyl Toluene	**2**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Acetone	**30**	0.59	1	B5H0410	08/16/2015	08/17/15 10:05	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 10:05	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 10:05	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 10:05	
Benzene	ND	0.80	1	B5H0410	08/16/2015	08/17/15 10:05	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-12
Lab ID: 1502794-12

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 10:05	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 10:05	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 10:05	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 10:05	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 10:05	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 10:05	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Cyclohexane	**0.86**	0.86	1	B5H0410	08/16/2015	08/17/15 10:05	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
Dichlorodifluoromethane	**4**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
Ethanol	**9**	0.47	1	B5H0410	08/16/2015	08/17/15 10:05	
Ethylbenzene	**1**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 10:05	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 10:05	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
m,p-Xylene	**20**	4	1	B5H0410	08/16/2015	08/17/15 10:05	
Methylene chloride	ND	0.87	1	B5H0410	08/16/2015	08/17/15 10:05	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 10:05	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Naphthalene	**2**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
o-Xylene	**4**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
p-Isopropyltoluene	**2**	1	1	B5H0410	08/16/2015	08/17/15 10:05	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Tetrachloroethene	**120**	20	10	B5H0463	08/17/2015	08/17/15 19:02	
Toluene	**5**	0.94	1	B5H0410	08/16/2015	08/17/15 10:05	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 10:05	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:05	
Trichlorofluoromethane	**40**	1	1	B5H0410	08/16/2015	08/17/15 10:05	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-12
Lab ID: 1502794-12

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 10:05	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 10:05	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 19:02*	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 10:05*	
Surrogate: 4-Bromofluorobenzene	*98.4 %*		*79.2 - 147*		B5H0464	08/17/2015	*08/19/15 00:07*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**6200**	1000	10	B5H0425	08/17/2015	08/17/15 23:08	
Surrogate: 4-Bromofluorobenzene	*94.8 %*		*70 - 130*		B5H0425	08/17/2015	*08/17/15 23:08*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-6 Dubl.

Lab ID: 1502794-13

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,1,1-Trichloroethane	**4**	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,1,2,2-Tetrachloroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,1,2-Trichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,1-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,1-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 10:44	
1,1-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2,3-Trichloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2,4-Trichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2,4-Trimethylbenzene	**1**	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2-Dibromo-3-chloropropane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2-Dibromoethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2-Dichloroethane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,2-Dichloropropane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,3,5-Trimethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
1,3-Butadiene	ND	0.55	1	B5H0410	08/16/2015	08/17/15 10:44	
1,3-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,4-Dichlorobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
1,4-Dioxane	ND	0.90	1	B5H0410	08/16/2015	08/17/15 10:44	
2,2,4-Trimethylpentane	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
2-Butanone	**0.80**	0.74	1	B5H0410	08/16/2015	08/17/15 10:44	
2-Chloroethyl vinyl ether	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
2-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
2-Hexanone	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
2-Propanol	**2100**	60	100	B5H0464	08/17/2015	08/19/15 00:48	
4-Chlorotoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
4-Ethyl Toluene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
4-Methyl-2-pentanone	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Acetone	**20**	0.59	1	B5H0410	08/16/2015	08/17/15 10:44	
Acetonitrile	ND	0.42	1	B5H0410	08/16/2015	08/17/15 10:44	
Acrolein	ND	0.57	1	B5H0410	08/16/2015	08/17/15 10:44	
Acrylonitrile	ND	0.54	1	B5H0410	08/16/2015	08/17/15 10:44	
Benzene	ND	0.80	1	B5H0410	08/16/2015	08/17/15 10:44	
Benzyl chloride	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Bromobenzene	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
Bromodichloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-6 Dubl.
Lab ID: 1502794-13

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: MFR**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	3	1	B5H0410	08/16/2015	08/17/15 10:44	
Bromomethane	ND	0.97	1	B5H0410	08/16/2015	08/17/15 10:44	
Carbon disulfide	ND	0.78	1	B5H0410	08/16/2015	08/17/15 10:44	
Carbon tetrachloride	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
Chlorobenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Chloroethane	ND	0.66	1	B5H0410	08/16/2015	08/17/15 10:44	
Chloroform	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Chloromethane	ND	0.52	1	B5H0410	08/16/2015	08/17/15 10:44	
cis-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 10:44	
cis-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Cyclohexane	ND	0.86	1	B5H0410	08/16/2015	08/17/15 10:44	
Dibromochloromethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
Dibromomethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
Dichlorodifluoromethane	**10**	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Dichlorotetrafluoroethane	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
Ethanol	**5**	0.47	1	B5H0410	08/16/2015	08/17/15 10:44	
Ethylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Freon-113	ND	2	1	B5H0410	08/16/2015	08/17/15 10:44	
Hexachlorobutadiene	ND	3	1	B5H0410	08/16/2015	08/17/15 10:44	
Isopropylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
m,p-Xylene	**5**	4	1	B5H0410	08/16/2015	08/17/15 10:44	
Methylene chloride	ND	0.87	1	B5H0410	08/16/2015	08/17/15 10:44	
MTBE	ND	0.90	1	B5H0410	08/16/2015	08/17/15 10:44	
n-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
n-Propylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Naphthalene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
o-Xylene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
p-Isopropyltoluene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
sec-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Styrene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
tert-Butylbenzene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Tetrachloroethene	**170**	20	10	B5H0463	08/17/2015	08/17/15 19:40	
Toluene	**3**	0.94	1	B5H0410	08/16/2015	08/17/15 10:44	
trans-1,2-Dichloroethene	ND	0.99	1	B5H0410	08/16/2015	08/17/15 10:44	
trans-1,3-Dichloropropene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Trichloroethene	ND	1	1	B5H0410	08/16/2015	08/17/15 10:44	
Trichlorofluoromethane	**230**	10	10	B5H0463	08/17/2015	08/17/15 19:40	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID 637 CS VP-6 Dubl.
Lab ID: 1502794-13

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	0.88	1	B5H0410	08/16/2015	08/17/15 10:44	
Vinyl chloride		ND	0.64	1	B5H0410	08/16/2015	08/17/15 10:44	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0463	08/17/2015	*08/17/15 19:40*	
Surrogate: 4-Bromofluorobenzene	*100 %*		*79.2 - 147*		B5H0464	08/17/2015	*08/19/15 00:48*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B5H0410	08/16/2015	*08/17/15 10:44*	

Gasoline Range Organics in Air by TO-3

Analyst: MFR

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5400**	1000	10	B5H0465	08/18/2015	08/18/15 10:00	
Surrogate: 4-Bromofluorobenzene	*99.2 %*		*70 - 130*		B5H0465	08/18/2015	*08/18/15 10:00*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

QUALITY CONTROL SECTION

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR										
Blank (B5H0409-BLK1)					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
Blank (B5H0409-BLK1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			
LCS (B5H0409-BS1)					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1,2-Tetrachloroethane	16.888	2	0.57	13.7299		123	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS (B5H0409-BS1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1-Trichloroethane	11.240	1	0.58	10.9123		103	70 - 130			
1,1,2,2-Tetrachloroethane	15.515	2	0.77	13.7299		113	70 - 130			
1,1,2-Trichloroethane	10.967	1	0.45	10.9123		100	70 - 130			
1,1-Dichloroethane	8.095	1	0.37	8.09480		100	70 - 130			
1,1-Dichloroethene	7.851	0.99	0.34	7.92990		99.0	70 - 130			
1,1-Dichloropropene	8.351	1	0.37	9.07722		92.0	70 - 130			
1,2,3-Trichloropropane	10.733	2	0.58	12.0597		89.0	70 - 130			
1,2,4-Trichlorobenzene	14.768	2	0.73	14.8422		99.5	70 - 130			
1,2,4-Trimethylbenzene	11.503	1	0.54	9.83166		117	70 - 130			
1,2-Dibromo-3-chloropropane	27.065	2	1	19.3319		140	70 - 130			L5
1,2-Dibromoethane	15.674	2	0.73	15.3670		102	70 - 130			
1,2-Dichlorobenzene	12.866	2	0.54	12.0246		107	70 - 130			
1,2-Dichloroethane	7.852	1	0.34	8.09480		97.0	70 - 130			
1,2-Dichloropropane	9.196	1	0.41	9.24213		99.5	70 - 130			
1,3,5-Trimethylbenzene	10.815	1	0.51	9.83166		110	70 - 130			
1,3-Butadiene	4.026	0.55	0.39	4.42454		91.0	70 - 130			
1,3-Dichlorobenzene	13.287	2	0.56	12.0246		110	70 - 130			
1,4-Dichlorobenzene	13.047	2	0.51	12.0246		109	70 - 130			
1,4-Dioxane	7.711	0.90	0.65	7.20695		107	70 - 130			
2,2,4-Trimethylpentane	9.437	1	0.35	9.34388		101	70 - 130			
2-Butanone	5.839	0.74	0.24	5.89824		99.0	70 - 130			
2-Chloroethyl vinyl ether	10.241	1	0.22	8.71583		118	70 - 130			
2-Chlorotoluene	11.183	1	0.50	10.3544		108	70 - 130			
2-Hexanone	8.439	1	0.43	8.19296		103	70 - 130			
2-Propanol	4.522	0.61	0.26	4.91534		92.0	70 - 130			
4-Chlorotoluene	8.646	1	0.47	10.3544		83.5	70 - 130			
4-Ethyl Toluene	10.962	1	0.47	9.83166		112	70 - 130			
4-Methyl-2-pentanone	8.234	1	0.30	8.19296		100	70 - 130			
Acetone	4.300	0.59	0.26	4.75084		90.5	70 - 130			
Acetonitrile	3.106	0.42	0.14	3.35804		92.5	70 - 130			
Acrolein	4.059	0.57	0.22	4.58593		88.5	70 - 130			
Acrylonitrile	4.232	0.54	0.18	4.34053		97.5	70 - 130			
Benzene	6.294	0.80	0.28	6.38953		98.5	70 - 130			
Benzyl chloride	12.011	1	0.37	10.3544		116	70 - 130			
Bromobenzene	10.146	2	0.59	12.8432		79.0	70 - 130			
Bromodichloromethane	14.205	2	0.70	13.4011		106	70 - 130			
Bromoform	25.221	3	0.90	20.6733		122	70 - 130			
Bromomethane	7.882	0.97	0.46	7.76597		102	70 - 130			
Carbon disulfide	6.166	0.78	0.31	6.22847		99.0	70 - 130			
Carbon tetrachloride	13.967	2	0.43	12.5826		111	70 - 130			
Chlorobenzene	9.990	1	0.41	9.20712		108	70 - 130			
Chloroethane	5.013	0.66	0.28	5.27722		95.0	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS (B5H0409-BS1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
Chloroform	9.765	1	0.50	9.76499		100	70 - 130			
Chloromethane	3.965	0.52	0.22	4.12982		96.0	70 - 130			
cis-1,2-Dichloroethene	7.811	0.99	0.28	7.92990		98.5	70 - 130			
cis-1,3-Dichloropropene	9.213	1	0.33	9.07724		102	70 - 130			
Cyclohexane	6.781	0.86	0.25	6.88425		98.5	70 - 130			
Dibromochloromethane	20.870	2	0.83	17.0371		122	70 - 130			
Dibromomethane	12.727	2	0.55	14.2196		89.5	70 - 130			
Dichlorodifluoromethane	12.413	1	0.56	9.89063		126	70 - 130			
Dichlorotetrafluoroethane	15.729	2	0.76	13.9812		112	70 - 130			
Ethanol	3.429	0.47	0.20	3.76834		91.0	70 - 130			
Ethylbenzene	9.379	1	0.35	8.68425		108	70 - 130			
Freon-113	15.710	2	0.58	15.3272		102	70 - 130			
Hexachlorobutadiene	15.678	3	1	21.3300		73.5	70 - 130			
Isopropylbenzene	10.864	1	0.52	9.83166		110	70 - 130			
m,p-Xylene	38.384	4	1	34.7370		110	70 - 130			
Methylene chloride	6.843	0.87	0.31	6.94740		98.5	70 - 130			
MTBE	7.210	0.90	0.33	7.21047		100	70 - 130			
n-Butylbenzene	12.461	1	0.42	10.9790		114	70 - 130			
n-Propylbenzene	10.618	1	0.41	9.83166		108	70 - 130			
Naphthalene	10.589	1	0.36	10.4843		101	70 - 130			
o-Xylene	9.466	1	0.40	8.68425		109	70 - 130			
p-Isopropyltoluene	9.991	1	0.51	10.9790		91.0	70 - 130			
sec-Butylbenzene	12.571	1	0.56	10.9790		114	70 - 130			
Styrene	9.073	1	0.44	8.51934		106	70 - 130			
tert-Butylbenzene	12.845	1	0.62	10.9790		117	70 - 130			
Tetrachloroethene	14.447	2	0.47	13.5650		106	70 - 130			
Toluene	7.537	0.94	0.28	7.53688		100	70 - 130			
trans-1,2-Dichloroethene	7.890	0.99	0.34	7.92990		99.5	70 - 130			
trans-1,3-Dichloropropene	9.213	1	0.34	9.07722		102	70 - 130			
Trichloroethene	10.962	1	0.47	10.7474		102	70 - 130			
Trichlorofluoromethane	11.405	1	0.53	11.2366		102	70 - 130			
Vinyl acetate	8.204	0.88	0.38	7.04204		116	70 - 130			
Vinyl chloride	4.985	0.64	0.21	5.11231		97.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.90*			*17.8935*		*106*	*79.2 - 147*			
LCS Dup (B5H0409-BSD1)					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1,1,2-Tetrachloroethane	16.956	2	0.57	13.7299		124	70 - 130	0.406	20	
1,1,1-Trichloroethane	11.240	1	0.58	10.9123		103	70 - 130	0.00	20	
1,1,2,2-Tetrachloroethane	15.446	2	0.77	13.7299		112	70 - 130	0.443	20	
1,1,2-Trichloroethane	10.858	1	0.45	10.9123		99.5	70 - 130	1.00	20	
1,1-Dichloroethane	8.014	1	0.37	8.09480		99.0	70 - 130	1.01	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS Dup (B5H0409-BSD1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
1,1-Dichloroethene	7.851	0.99	0.34	7.92990		99.0	70 - 130	0.00	20	
1,1-Dichloropropene	7.670	1	0.37	9.07722		84.5	70 - 130	8.50	20	
1,2,3-Trichloropropane	9.949	2	0.58	12.0597		82.5	70 - 130	7.58	20	
1,2,4-Trichlorobenzene	13.284	2	0.73	14.8422		89.5	70 - 130	10.6	20	
1,2,4-Trimethylbenzene	11.356	1	0.54	9.83166		116	70 - 130	1.29	20	
1,2-Dibromo-3-chloropropane	25.325	2	1	19.3319		131	70 - 130	6.64	20	L5
1,2-Dibromoethane	15.597	2	0.73	15.3670		102	70 - 130	0.491	20	
1,2-Dichlorobenzene	12.926	2	0.54	12.0246		108	70 - 130	0.466	20	
1,2-Dichloroethane	7.811	1	0.34	8.09480		96.5	70 - 130	0.517	20	
1,2-Dichloropropane	9.196	1	0.41	9.24213		99.5	70 - 130	0.00	20	
1,3,5-Trimethylbenzene	10.717	1	0.51	9.83166		109	70 - 130	0.913	20	
1,3-Butadiene	4.270	0.55	0.39	4.42454		96.5	70 - 130	5.87	20	
1,3-Dichlorobenzene	13.287	2	0.56	12.0246		110	70 - 130	0.00	20	
1,4-Dichlorobenzene	13.047	2	0.51	12.0246		109	70 - 130	0.00	20	
1,4-Dioxane	7.567	0.90	0.65	7.20695		105	70 - 130	1.89	20	
2,2,4-Trimethylpentane	9.391	1	0.35	9.34388		100	70 - 130	0.496	20	
2-Butanone	5.780	0.74	0.24	5.89824		98.0	70 - 130	1.02	20	
2-Chloroethyl vinyl ether	9.282	1	0.22	8.71583		106	70 - 130	9.82	20	
2-Chlorotoluene	11.235	1	0.50	10.3544		108	70 - 130	0.462	20	
2-Hexanone	8.316	1	0.43	8.19296		102	70 - 130	1.47	20	
2-Propanol	4.891	0.61	0.26	4.91534		99.5	70 - 130	7.83	20	
4-Chlorotoluene	8.128	1	0.47	10.3544		78.5	70 - 130	6.17	20	
4-Ethyl Toluene	10.471	1	0.47	9.83166		106	70 - 130	4.59	20	
4-Methyl-2-pentanone	8.070	1	0.30	8.19296		98.5	70 - 130	2.01	20	
Acetone	4.466	0.59	0.26	4.75084		94.0	70 - 130	3.79	20	
Acetonitrile	3.375	0.42	0.14	3.35804		100	70 - 130	8.29	20	
Acrolein	3.279	0.57	0.22	4.58593		71.5	70 - 130	21.2	20	R
Acrylonitrile	4.189	0.54	0.18	4.34053		96.5	70 - 130	1.03	20	
Benzene	6.230	0.80	0.28	6.38953		97.5	70 - 130	1.02	20	
Benzyl chloride	12.166	1	0.37	10.3544		117	70 - 130	1.28	20	
Bromobenzene	9.440	2	0.59	12.8432		73.5	70 - 130	7.21	20	
Bromodichloromethane	14.071	2	0.70	13.4011		105	70 - 130	0.948	20	
Bromoform	25.015	3	0.90	20.6733		121	70 - 130	0.823	20	
Bromomethane	8.193	0.97	0.46	7.76597		106	70 - 130	3.86	20	
Carbon disulfide	6.135	0.78	0.31	6.22847		98.5	70 - 130	0.506	20	
Carbon tetrachloride	13.904	2	0.43	12.5826		110	70 - 130	0.451	20	
Chlorobenzene	9.990	1	0.41	9.20712		108	70 - 130	0.00	20	
Chloroethane	5.515	0.66	0.28	5.27722		104	70 - 130	9.52	20	
Chloroform	9.619	1	0.50	9.76499		98.5	70 - 130	1.51	20	
Chloromethane	4.171	0.52	0.22	4.12982		101	70 - 130	5.08	20	
cis-1,2-Dichloroethene	7.771	0.99	0.28	7.92990		98.0	70 - 130	0.509	20	
cis-1,3-Dichloropropene	9.077	1	0.33	9.07724		100	70 - 130	1.49	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0409 - No_Prep_AIR (continued)										
LCS Dup (B5H0409-BSD1) - Continued					Prepared: 8/15/2015 Analyzed: 8/15/2015					
Cyclohexane	6.678	0.86	0.25	6.88425		97.0	70 - 130	1.53	20	
Dibromochloromethane	20.700	2	0.83	17.0371		122	70 - 130	0.820	20	
Dibromomethane	11.944	2	0.55	14.2196		84.0	70 - 130	6.34	20	
Dichlorodifluoromethane	12.561	1	0.56	9.89063		127	70 - 130	1.19	20	
Dichlorotetrafluoroethane	16.148	2	0.76	13.9812		116	70 - 130	2.63	20	
Ethanol	3.655	0.47	0.20	3.76834		97.0	70 - 130	6.38	20	
Ethylbenzene	9.336	1	0.35	8.68425		108	70 - 130	0.464	20	
Freon-113	15.864	2	0.58	15.3272		104	70 - 130	0.971	20	
Hexachlorobutadiene	17.704	3	1	21.3300		83.0	70 - 130	12.1	20	
Isopropylbenzene	10.766	1	0.52	9.83166		110	70 - 130	0.909	20	
m,p-Xylene	38.037	4	1	34.7370		110	70 - 130	0.909	20	
Methylene chloride	6.774	0.87	0.31	6.94740		97.5	70 - 130	1.02	20	
MTBE	7.102	0.90	0.33	7.21047		98.5	70 - 130	1.51	20	
n-Butylbenzene	12.626	1	0.42	10.9790		115	70 - 130	1.31	20	
n-Propylbenzene	10.766	1	0.41	9.83166		110	70 - 130	1.38	20	
Naphthalene	11.323	1	0.36	10.4843		108	70 - 130	6.70	20	
o-Xylene	9.422	1	0.40	8.68425		108	70 - 130	0.460	20	
p-Isopropyltoluene	9.222	1	0.51	10.9790		84.0	70 - 130	8.00	20	
sec-Butylbenzene	12.406	1	0.56	10.9790		113	70 - 130	1.32	20	
Styrene	9.116	1	0.44	8.51934		107	70 - 130	0.468	20	
tert-Butylbenzene	12.681	1	0.62	10.9790		116	70 - 130	1.29	20	
Tetrachloroethene	14.447	2	0.47	13.5650		106	70 - 130	0.00	20	
Toluene	7.499	0.94	0.28	7.53688		99.5	70 - 130	0.501	20	
trans-1,2-Dichloroethene	7.771	0.99	0.34	7.92990		98.0	70 - 130	1.52	20	
trans-1,3-Dichloropropene	9.213	1	0.34	9.07722		102	70 - 130	0.00	20	
Trichloroethene	10.962	1	0.47	10.7474		102	70 - 130	0.00	20	
Trichlorofluoromethane	11.911	1	0.53	11.2366		106	70 - 130	4.34	20	
Vinyl acetate	8.169	0.88	0.38	7.04204		116	70 - 130	0.430	20	
Vinyl chloride	5.215	0.64	0.21	5.11231		102	70 - 130	4.51	20	
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR										
Blank (B5H0410-BLK1)					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
Blank (B5H0410-BLK1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*18.32*			*17.8935*		*102*	*79.2 - 147*			
LCS (B5H0410-BS1)					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,1,2-Tetrachloroethane	16.133	2	0.57	13.7299		118	70 - 130			
1,1,1-Trichloroethane	10.094	1	0.58	10.9123		92.5	70 - 130			
1,1,2,2-Tetrachloroethane	15.377	2	0.77	13.7299		112	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS (B5H0410-BS1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,2-Trichloroethane	11.185	1	0.45	10.9123		102	70 - 130			
1,1-Dichloroethane	7.528	1	0.37	8.09480		93.0	70 - 130			
1,1-Dichloroethene	6.899	0.99	0.34	7.92990		87.0	70 - 130			
1,1-Dichloropropene	8.533	1	0.37	9.07722		94.0	70 - 130			
1,2,3-Trichloropropane	10.974	2	0.58	12.0597		91.0	70 - 130			
1,2,4-Trichlorobenzene	14.545	2	0.73	14.8422		98.0	70 - 130			
1,2,4-Trimethylbenzene	11.257	1	0.54	9.83166		114	70 - 130			
1,2-Dibromo-3-chloropropane	29.674	2	1	19.3319		154	70 - 130			L5
1,2-Dibromoethane	15.367	2	0.73	15.3670		100	70 - 130			
1,2-Dichlorobenzene	12.145	2	0.54	12.0246		101	70 - 130			
1,2-Dichloroethane	8.459	1	0.34	8.09480		104	70 - 130			
1,2-Dichloropropane	9.566	1	0.41	9.24213		104	70 - 130			
1,3,5-Trimethylbenzene	10.274	1	0.51	9.83166		104	70 - 130			
1,3-Butadiene	4.734	0.55	0.39	4.42454		107	70 - 130			
1,3-Dichlorobenzene	12.686	2	0.56	12.0246		106	70 - 130			
1,4-Dichlorobenzene	12.265	2	0.51	12.0246		102	70 - 130			
1,4-Dioxane	7.423	0.90	0.65	7.20695		103	70 - 130			
2,2,4-Trimethylpentane	9.811	1	0.35	9.34388		105	70 - 130			
2-Butanone	5.662	0.74	0.24	5.89824		96.0	70 - 130			
2-Chloroethyl vinyl ether	9.500	1	0.22	8.71583		109	70 - 130			
2-Chlorotoluene	10.820	1	0.50	10.3544		104	70 - 130			
2-Hexanone	8.889	1	0.43	8.19296		108	70 - 130			
2-Propanol	4.620	0.61	0.26	4.91534		94.0	70 - 130			
4-Chlorotoluene	7.973	1	0.47	10.3544		77.0	70 - 130			
4-Ethyl Toluene	10.422	1	0.47	9.83166		106	70 - 130			
4-Methyl-2-pentanone	8.766	1	0.30	8.19296		107	70 - 130			
Acetone	4.941	0.59	0.26	4.75084		104	70 - 130			
Acetonitrile	4.164	0.42	0.14	3.35804		124	70 - 130			
Acrolein	4.563	0.57	0.22	4.58593		99.5	70 - 130			
Acrylonitrile	4.124	0.54	0.18	4.34053		95.0	70 - 130			
Benzene	6.262	0.80	0.28	6.38953		98.0	70 - 130			
Benzyl chloride	11.649	1	0.37	10.3544		112	70 - 130			
Bromobenzene	9.568	2	0.59	12.8432		74.5	70 - 130			
Bromodichloromethane	14.607	2	0.70	13.4011		109	70 - 130			
Bromoform	23.671	3	0.90	20.6733		114	70 - 130			
Bromomethane	8.348	0.97	0.46	7.76597		108	70 - 130			
Carbon disulfide	5.668	0.78	0.31	6.22847		91.0	70 - 130			
Carbon tetrachloride	14.030	2	0.43	12.5826		111	70 - 130			
Chlorobenzene	9.575	1	0.41	9.20712		104	70 - 130			
Chloroethane	5.990	0.66	0.28	5.27722		114	70 - 130			
Chloroform	9.033	1	0.50	9.76499		92.5	70 - 130			
Chloromethane	4.254	0.52	0.22	4.12982		103	70 - 130			

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS (B5H0410-BS1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
cis-1,2-Dichloroethene	6.820	0.99	0.28	7.92990		86.0	70 - 130			
cis-1,3-Dichloropropene	9.032	1	0.33	9.07724		99.5	70 - 130			
Cyclohexane	6.884	0.86	0.25	6.88425		100	70 - 130			
Dibromochloromethane	19.508	2	0.83	17.0371		114	70 - 130			
Dibromomethane	13.651	2	0.55	14.2196		96.0	70 - 130			
Dichlorodifluoromethane	11.770	1	0.56	9.89063		119	70 - 130			
Dichlorotetrafluoroethane	15.799	2	0.76	13.9812		113	70 - 130			
Ethanol	4.070	0.47	0.20	3.76834		108	70 - 130			
Ethylbenzene	8.684	1	0.35	8.68425		100	70 - 130			
Freon-113	14.561	2	0.58	15.3272		95.0	70 - 130			
Hexachlorobutadiene	15.144	3	1	21.3300		71.0	70 - 130			
Isopropylbenzene	10.225	1	0.52	9.83166		104	70 - 130			
m,p-Xylene	36.300	4	1	34.7370		104	70 - 130			
Methylene chloride	6.287	0.87	0.31	6.94740		90.5	70 - 130			
MTBE	6.273	0.90	0.33	7.21047		87.0	70 - 130			
n-Butylbenzene	12.626	1	0.42	10.9790		115	70 - 130			
n-Propylbenzene	9.979	1	0.41	9.83166		102	70 - 130			
Naphthalene	10.956	1	0.36	10.4843		104	70 - 130			
o-Xylene	9.075	1	0.40	8.68425		104	70 - 130			
p-Isopropyltoluene	9.607	1	0.51	10.9790		87.5	70 - 130			
sec-Butylbenzene	12.187	1	0.56	10.9790		111	70 - 130			
Styrene	8.221	1	0.44	8.51934		96.5	70 - 130			
tert-Butylbenzene	12.461	1	0.62	10.9790		114	70 - 130			
Tetrachloroethene	13.294	2	0.47	13.5650		98.0	70 - 130			
Toluene	7.311	0.94	0.28	7.53688		97.0	70 - 130			
trans-1,2-Dichloroethene	6.899	0.99	0.34	7.92990		87.0	70 - 130			
trans-1,3-Dichloropropene	9.123	1	0.34	9.07722		100	70 - 130			
Trichloroethene	10.640	1	0.47	10.7474		99.0	70 - 130			
Trichlorofluoromethane	12.248	1	0.53	11.2366		109	70 - 130			
Vinyl acetate	7.711	0.88	0.38	7.04204		110	70 - 130			
Vinyl chloride	5.240	0.64	0.21	5.11231		102	70 - 130			
Surrogate: 4-Bromofluorobenzene	*19.40*			*17.8935*		*108*	*79.2 - 147*			
LCS Dup (B5H0410-BSD1)					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,1,1,2-Tetrachloroethane	16.476	2	0.57	13.7299		120	70 - 130	2.11	20	
1,1,1-Trichloroethane	10.421	1	0.58	10.9123		95.5	70 - 130	3.19	20	
1,1,2,2-Tetrachloroethane	15.721	2	0.77	13.7299		114	70 - 130	2.21	20	
1,1,2-Trichloroethane	11.512	1	0.45	10.9123		106	70 - 130	2.88	20	
1,1-Dichloroethane	7.771	1	0.37	8.09480		96.0	70 - 130	3.17	20	
1,1-Dichloroethene	7.058	0.99	0.34	7.92990		89.0	70 - 130	2.27	20	
1,1-Dichloropropene	8.124	1	0.37	9.07722		89.5	70 - 130	4.90	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS Dup (B5H0410-BSD1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
1,2,3-Trichloropropane	10.371	2	0.58	12.0597		86.0	70 - 130	5.65	20	
1,2,4-Trichlorobenzene	12.393	2	0.73	14.8422		83.5	70 - 130	16.0	20	
1,2,4-Trimethylbenzene	11.454	1	0.54	9.83166		116	70 - 130	1.73	20	
1,2-Dibromo-3-chloropropane	27.935	2	1	19.3319		144	70 - 130	6.04	20	L5
1,2-Dibromoethane	15.751	2	0.73	15.3670		102	70 - 130	2.47	20	
1,2-Dichlorobenzene	12.445	2	0.54	12.0246		104	70 - 130	2.44	20	
1,2-Dichloroethane	8.621	1	0.34	8.09480		106	70 - 130	1.90	20	
1,2-Dichloropropane	9.935	1	0.41	9.24213		108	70 - 130	3.79	20	
1,3,5-Trimethylbenzene	10.372	1	0.51	9.83166		106	70 - 130	0.952	20	
1,3-Butadiene	4.734	0.55	0.39	4.42454		107	70 - 130	0.00	20	
1,3-Dichlorobenzene	12.806	2	0.56	12.0246		106	70 - 130	0.943	20	
1,4-Dichlorobenzene	12.385	2	0.51	12.0246		103	70 - 130	0.976	20	
1,4-Dioxane	7.567	0.90	0.65	7.20695		105	70 - 130	1.92	20	
2,2,4-Trimethylpentane	10.185	1	0.35	9.34388		109	70 - 130	3.74	20	
2-Butanone	5.810	0.74	0.24	5.89824		98.5	70 - 130	2.57	20	
2-Chloroethyl vinyl ether	8.977	1	0.22	8.71583		103	70 - 130	5.66	20	
2-Chlorotoluene	10.665	1	0.50	10.3544		103	70 - 130	1.45	20	
2-Hexanone	9.258	1	0.43	8.19296		113	70 - 130	4.06	20	
2-Propanol	5.333	0.61	0.26	4.91534		108	70 - 130	14.3	20	
4-Chlorotoluene	7.248	1	0.47	10.3544		70.0	70 - 130	9.52	20	
4-Ethyl Toluene	10.667	1	0.47	9.83166		108	70 - 130	2.33	20	
4-Methyl-2-pentanone	9.135	1	0.30	8.19296		112	70 - 130	4.12	20	
Acetone	5.036	0.59	0.26	4.75084		106	70 - 130	1.90	20	
Acetonitrile	3.946	0.42	0.14	3.35804		118	70 - 130	5.38	20	
Acrolein	4.104	0.57	0.22	4.58593		89.5	70 - 130	10.6	20	
Acrylonitrile	4.319	0.54	0.18	4.34053		99.5	70 - 130	4.63	20	
Benzene	6.453	0.80	0.28	6.38953		101	70 - 130	3.02	20	
Benzyl chloride	11.959	1	0.37	10.3544		115	70 - 130	2.63	20	
Bromobenzene	10.210	2	0.59	12.8432		79.5	70 - 130	6.49	20	
Bromodichloromethane	15.143	2	0.70	13.4011		113	70 - 130	3.60	20	
Bromoform	24.291	3	0.90	20.6733		118	70 - 130	2.59	20	
Bromomethane	8.387	0.97	0.46	7.76597		108	70 - 130	0.464	20	
Carbon disulfide	5.824	0.78	0.31	6.22847		93.5	70 - 130	2.71	20	
Carbon tetrachloride	14.785	2	0.43	12.5826		118	70 - 130	5.24	20	
Chlorobenzene	9.760	1	0.41	9.20712		106	70 - 130	1.90	20	
Chloroethane	5.990	0.66	0.28	5.27722		114	70 - 130	0.00	20	
Chloroform	9.228	1	0.50	9.76499		94.5	70 - 130	2.14	20	
Chloromethane	4.398	0.52	0.22	4.12982		106	70 - 130	3.34	20	
cis-1,2-Dichloroethene	7.058	0.99	0.28	7.92990		89.0	70 - 130	3.43	20	
cis-1,3-Dichloropropene	9.531	1	0.33	9.07724		105	70 - 130	5.38	20	
Cyclohexane	7.194	0.86	0.25	6.88425		104	70 - 130	4.40	20	
Dibromochloromethane	20.104	2	0.83	17.0371		118	70 - 130	3.01	20	

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0410 - No_Prep_AIR (continued)										
LCS Dup (B5H0410-BSD1) - Continued					Prepared: 8/16/2015 Analyzed: 8/16/2015					
Dibromomethane	13.082	2	0.55	14.2196		92.0	70 - 130	4.26	20	
Dichlorodifluoromethane	12.462	1	0.56	9.89063		126	70 - 130	5.71	20	
Dichlorotetrafluoroethane	16.148	2	0.76	13.9812		116	70 - 130	2.19	20	
Ethanol	3.994	0.47	0.20	3.76834		106	70 - 130	1.87	20	
Ethylbenzene	8.945	1	0.35	8.68425		103	70 - 130	2.96	20	
Freon-113	14.867	2	0.58	15.3272		97.0	70 - 130	2.08	20	
Hexachlorobutadiene	15.891	3	1	21.3300		74.5	70 - 130	4.81	20	
Isopropylbenzene	10.422	1	0.52	9.83166		106	70 - 130	1.90	20	
m,p-Xylene	37.169	4	1	34.7370		107	70 - 130	2.36	20	
Methylene chloride	6.392	0.87	0.31	6.94740		92.0	70 - 130	1.64	20	
MTBE	6.417	0.90	0.33	7.21047		89.0	70 - 130	2.27	20	
n-Butylbenzene	12.736	1	0.42	10.9790		116	70 - 130	0.866	20	
n-Propylbenzene	10.274	1	0.41	9.83166		104	70 - 130	2.91	20	
Naphthalene	12.686	1	0.36	10.4843		121	70 - 130	14.6	20	
o-Xylene	9.205	1	0.40	8.68425		106	70 - 130	1.43	20	
p-Isopropyltoluene	8.564	1	0.51	10.9790		78.0	70 - 130	11.5	20	
sec-Butylbenzene	12.351	1	0.56	10.9790		112	70 - 130	1.34	20	
Styrene	8.434	1	0.44	8.51934		99.0	70 - 130	2.56	20	
tert-Butylbenzene	12.626	1	0.62	10.9790		115	70 - 130	1.31	20	
Tetrachloroethene	13.836	2	0.47	13.5650		102	70 - 130	4.00	20	
Toluene	7.612	0.94	0.28	7.53688		101	70 - 130	4.04	20	
trans-1,2-Dichloroethene	7.058	0.99	0.34	7.92990		89.0	70 - 130	2.27	20	
trans-1,3-Dichloropropene	9.486	1	0.34	9.07722		104	70 - 130	3.90	20	
Trichloroethene	10.909	1	0.47	10.7474		102	70 - 130	2.49	20	
Trichlorofluoromethane	12.754	1	0.53	11.2366		114	70 - 130	4.04	20	
Vinyl acetate	8.028	0.88	0.38	7.04204		114	70 - 130	4.03	20	
Vinyl chloride	5.393	0.64	0.21	5.11231		106	70 - 130	2.88	20	
Surrogate: 4-Bromofluorobenzene	*19.11*			*17.8935*		*107*	*79.2 - 147*			

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0463 - No_Prep_AIR										
Blank (B5H0463-BLK1)					Prepared: 8/17/2015 Analyzed: 8/17/2015					
2-Propanol	ND	0.61	0.26							
Acetone	ND	0.59	0.26							
Ethanol	ND	0.47	0.20							
Tetrachloroethene	ND	2	0.47							
Trichlorofluoromethane	ND	1	0.53							
Surrogate: 4-Bromofluorobenzene	*19.18*			*17.8935*		*107*	*79.2 - 147*			
LCS (B5H0463-BS1)					Prepared: 8/17/2015 Analyzed: 8/17/2015					
2-Propanol	5.161	0.61	0.26	4.91534		105	70 - 130			
Acetone	4.798	0.59	0.26	4.75084		101	70 - 130			
Ethanol	3.844	0.47	0.20	3.76834		102	70 - 130			
Tetrachloroethene	13.226	2	0.47	13.5650		97.5	70 - 130			
Trichlorofluoromethane	11.517	1	0.53	11.2366		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			
LCS Dup (B5H0463-BSD1)					Prepared: 8/17/2015 Analyzed: 8/17/2015					
2-Propanol	5.505	0.61	0.26	4.91534		112	70 - 130	6.45	20	
Acetone	5.178	0.59	0.26	4.75084		109	70 - 130	7.62	20	
Ethanol	3.844	0.47	0.20	3.76834		102	70 - 130	0.00	20	
Tetrachloroethene	13.904	2	0.47	13.5650		102	70 - 130	5.00	20	
Trichlorofluoromethane	12.304	1	0.53	11.2366		110	70 - 130	6.60	20	
Surrogate: 4-Bromofluorobenzene	*18.82*			*17.8935*		*105*	*79.2 - 147*			

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0464 - No_Prep_AIR										
Blank (B5H0464-BLK1)						Prepared: 8/18/2015 Analyzed: 8/18/2015				
2-Propanol	ND	0.61	0.26							
Surrogate: 4-Bromofluorobenzene	*18.47*			*17.8935*		*103*	*79.2 - 147*			
LCS (B5H0464-BS1)						Prepared: 8/18/2015 Analyzed: 8/18/2015				
2-Propanol	5.309	0.61	0.26	4.91534		108	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.75*			*17.8935*		*105*	*79.2 - 147*			
LCS Dup (B5H0464-BSD1)						Prepared: 8/18/2015 Analyzed: 8/18/2015				
2-Propanol	5.210	0.61	0.26	4.91534		106	70 - 130	1.87	20	
Surrogate: 4-Bromofluorobenzene	*18.61*			*17.8935*		*104*	*79.2 - 147*			

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Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0425 - No_Prep_AIR										
Blank (B5H0425-BLK1)						Prepared: 8/17/2015 Analyzed: 8/17/2015				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*17.25*			*17.8935*		*96.4*	*70 - 130*			
LCS (B5H0425-BS1)						Prepared: 8/17/2015 Analyzed: 8/17/2015				
Gasoline Range Organics	839.509	100	70	817.996		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	*17.18*			*17.8935*		*96.0*	*70 - 130*			
LCS Dup (B5H0425-BSD1)						Prepared: 8/17/2015 Analyzed: 8/17/2015				
Gasoline Range Organics	863.395	100	70	817.996		106	70 - 130	2.81	20	
Surrogate: 4-Bromofluorobenzene	*17.75*			*17.8935*		*99.2*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5H0465 - No_Prep_AIR										
Blank (B5H0465-BLK1)						Prepared: 8/18/2015 Analyzed: 8/18/2015				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*16.96*			*17.8935*		*94.8*	*70 - 130*			
LCS (B5H0465-BS1)						Prepared: 8/18/2015 Analyzed: 8/18/2015				
Gasoline Range Organics	768.589	100	70	817.996		94.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	*17.32*			*17.8935*		*96.8*	*70 - 130*			
LCS Dup (B5H0465-BSD1)						Prepared: 8/18/2015 Analyzed: 8/18/2015				
Gasoline Range Organics	832.311	100	70	817.996		102	70 - 130	7.96	20	
Surrogate: 4-Bromofluorobenzene	*18.32*			*17.8935*		*102*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 22 - 637 S Clarence St, Los Angele
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
L5	Laboratory Control Sample high biased. Sample result/s was non-detect (ND) for the target analyte; therefore reanalysis was not necessary.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page ____ of ____

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 2013071

Method of Transport: ☑ Client ☐ FedEx ☐ GSO ☐ Other: ____ ☐ ATL ☐ OnTrac

Sample Conditions Upon Receipt

Condition	Y	N	Condition	Y	N
1. CHILLED n/a	☐	☐	5. # OF SAMPLES MATCH COC	☑	☐
2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
3. CONTAINER INTACT	☑	☐	7. COOLER TEMP, deg C: —		
4. SEALED	☐	☑			

CUSTOMER

Company: Hushmand & Assoc
Address: 250 Goddard
City: Irvine State: CA Zip: 92618 Tel: Fax:

SEND REPORT TO:
Attn: Naresh Bellana Email:
Company: Hushmand & Assoc
Address: 250 Goddard
City: Irvine State: CA Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: Stanska LAC
Project No.: LAC 15-003
Sampler: Don Terres
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; TPH Gas

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL; AIR

Container: #; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister; Material: 1=Glass; 2=Plastic; 3=Metal; Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn((Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample ID / Location	Date	Time	TO-15	TPH Gas	Matrix	TAT	#	Type	Material	Preservative	REMARKS
1	1502794-01	637 CS VP-1	8/13	10:00	✓	✓	AIR			7			
2	-02	VP-2	↓	10:07	✓	✓	↓			↓			
3	-03	VP-3	↓	10:11	✓	✓	↓			↓			
4	-04	VP-4	↓	10:25	✓	✓	↓			↓			
5	-05	VP-5	↓	10:19	✓	✓	↓			↓			
6	-06	VP-6	↓	10:27	✓	✓	↓			↓			
7	-07	VP-7	↓	10:43	✓	✓	↓			↓			
8	-08	VP-8	↓	10:33	✓	✓	↓			↓			
9	-09	VP-9	↓	10:30	✓	✓	↓			↓			
10	-10	VP-10	↓	10:46	✓	✓	↓			↓			

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name: Don Terres   Signature: [signature]

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature] Don Terres	8/13	10:25	Frown [signature]	8/13/15	1025

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 201307
Method of Transport	Sample Conditions Upon Receipt			
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:		Tel:
	City:	State: Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Naresh Bellamkonda Email:	Attn: Email:
Company: Hushmand & Assoc	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Stanislaus LAC		
Project No.: LAC 15003	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	TPH Gas	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	Air	TAT	Container #	Container Type	Container Material	Preservative	QA/QC / REMARKS
1	1502794-11	637 CS VP-11	8/13	10:48								/	/						↓		7				
2	-12	VP-12	↓	10:51								/	/												
3	-13	VP-6 Dupl.	↓	11:00								/	/						↓		↓				
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container

QA/QC
- ☐ Routine
- ☐ Caltrans
- ☐ Legal
- ☐ RWQCB
- ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
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   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
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   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name

Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	8/13	12:25		8/13/15	1225
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

Rachelle Arada

From: Naresh Bellana [naresh@haieng.com]
Sent: Thursday, August 20, 2015 3:56 PM
To: Rachelle Arada
Subject: RE: Results/Invoice - Skanska LAC, LAC 15-003 (ATL# 1502794)

Rachelle,

Please change the client reference/project number to "Parcel 22 – 637 S Clarence St, Los Angeles".

Let me know if you have any questions.

Thanking you,

Sincerely,

Naresh Bellana, MS, PE
Senior Staff Engineer

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. (949) 777-1266
d. (949) 777-1275
f. (949) 777-1276

From: Rachelle Arada [mailto:Rachelle@atlglobal.com]
Sent: Thursday, August 20, 2015 3:51 PM
To: Naresh Bellana
Subject: Results/Invoice - Skanska LAC, LAC 15-003 (ATL# 1502794)

Hi Naresh,

Attached are the results/invoice for the above project.

Rachelle Arada
Project Manager

Advanced Technology Laboratories
www.atlglobal.com
Tel: (562) 989-4045 ext. 237
Fax: (562) 989-4040

March 26, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1601497

Client Reference : Parcel 20 6th St. Bridge, LAC 15-003

Enclosed are the results for sample(s) received on April 26, 2016 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P-20 VP-1 @ 5'	1601497-01	Vapor	4/26/16 11:59	4/26/16 14:00
P-20 VP-2 @ 5'	1601497-02	Vapor	4/26/16 12:02	4/26/16 14:00
P-20 VP-3 @ 5'	1601497-03	Vapor	4/26/16 12:05	4/26/16 14:00
P-20 VP-4 @ 5'	1601497-04	Vapor	4/26/16 12:11	4/26/16 14:00
P-20 VP-5 @ 3'	1601497-05	Vapor	4/26/16 12:16	4/26/16 14:00
P-20 VP-6 @ 5'	1601497-06	Vapor	4/26/16 12:20	4/26/16 14:00
P-20 VP-7 @ 3'	1601497-07	Vapor	4/26/16 12:27	4/26/16 14:00
P-20 VP-8 @ 5'	1601497-08	Vapor	4/26/16 12:31	4/26/16 14:00
P-20 VP-9 @ 5'	1601497-09	Vapor	4/26/16 12:36	4/26/16 14:00
P-20 VP-4 @ 5' Dup	1601497-10	Vapor	4/26/16 12:41	4/26/16 14:00
P-20 VP-9 @ 5' Dup	1601497-11	Vapor	4/26/16 12:45	4/26/16 14:00

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-1 @ 5'
Lab ID: 1601497-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,1,1-Trichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,1,2,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,1,2-Trichloroethane	**50**	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,1-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,1-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,1-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2,3-Trichloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2,4-Trichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2,4-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2-Dibromo-3-chloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2-Dibromoethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,2-Dichloropropane	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,3,5-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
1,3-Butadiene	ND	6	10	B6D0656	04/27/2016	04/27/16 11:39	
1,3-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,4-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
1,4-Dioxane	ND	9	10	B6D0656	04/27/2016	04/27/16 11:39	
2,2,4-Trimethylpentane	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
2-Butanone	ND	7	10	B6D0656	04/27/2016	04/27/16 11:39	
2-Chloroethyl vinyl ether	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
2-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
2-Hexanone	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
2-Propanol	ND	6	10	B6D0656	04/27/2016	04/27/16 11:39	
4-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
4-Ethyl Toluene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
4-Methyl-2-pentanone	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Acetone	**60**	6	10	B6D0656	04/27/2016	04/27/16 11:39	
Acetonitrile	ND	4	10	B6D0656	04/27/2016	04/27/16 11:39	
Acrolein	ND	6	10	B6D0656	04/27/2016	04/27/16 11:39	
Acrylonitrile	ND	5	10	B6D0656	04/27/2016	04/27/16 11:39	
Benzene	ND	8	10	B6D0656	04/27/2016	04/27/16 11:39	
Benzyl chloride	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Bromobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Bromodichloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-1 @ 5'

Lab ID: 1601497-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	30	10	B6D0656	04/27/2016	04/27/16 11:39	
Bromomethane	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Carbon disulfide	ND	8	10	B6D0656	04/27/2016	04/27/16 11:39	
Carbon tetrachloride	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Chlorobenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Chloroethane	ND	7	10	B6D0656	04/27/2016	04/27/16 11:39	
Chloroform	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Chloromethane	ND	5	10	B6D0656	04/27/2016	04/27/16 11:39	
cis-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
cis-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Cyclohexane	ND	9	10	B6D0656	04/27/2016	04/27/16 11:39	
Dibromochloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Dibromomethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Dichlorodifluoromethane	**120**	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Dichlorotetrafluoroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Ethanol	ND	5	10	B6D0656	04/27/2016	04/27/16 11:39	
Ethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Freon-113	ND	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Hexachlorobutadiene	ND	30	10	B6D0656	04/27/2016	04/27/16 11:39	
Isopropylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
m,p-Xylene	ND	40	10	B6D0656	04/27/2016	04/27/16 11:39	
Methylene chloride	ND	9	10	B6D0656	04/27/2016	04/27/16 11:39	
MTBE	ND	9	10	B6D0656	04/27/2016	04/27/16 11:39	
n-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
n-Propylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Naphthalene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
o-Xylene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
p-Isopropyltoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
sec-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Styrene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
tert-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Tetrachloroethene	**310**	20	10	B6D0656	04/27/2016	04/27/16 11:39	
Toluene	ND	9	10	B6D0656	04/27/2016	04/27/16 11:39	
trans-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
trans-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Trichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 11:39	
Trichlorofluoromethane	**120000**	2800	2000	B6D0710	04/28/2016	04/28/16 19:41	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-1 @ 5'

Lab ID: 1601497-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	9	10	B6D0656	04/27/2016	04/27/16 11:39	
Vinyl chloride		ND	6	10	B6D0656	04/27/2016	04/27/16 11:39	
Surrogate: 4-Bromofluorobenzene	*112 %*		*79.2 - 147*		B6D0710	04/28/2016	*04/28/16 19:41*	
Surrogate: 4-Bromofluorobenzene	*100 %*		*79.2 - 147*		B6D0656	04/27/2016	*04/27/16 11:39*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**120000**	41000	400	B6E0059	04/29/2016	04/29/16 12:27	
Surrogate: 4-Bromofluorobenzene	*111 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 12:27*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-2 @ 5'

Lab ID: 1601497-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,1,1-Trichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,1,2,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,1,2-Trichloroethane	**20**	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,1-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,1-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,1-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2,3-Trichloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2,4-Trichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2,4-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2-Dibromo-3-chloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2-Dibromoethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,2-Dichloropropane	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,3,5-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
1,3-Butadiene	ND	6	10	B6D0656	04/27/2016	04/27/16 12:52	
1,3-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,4-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
1,4-Dioxane	ND	9	10	B6D0656	04/27/2016	04/27/16 12:52	
2,2,4-Trimethylpentane	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
2-Butanone	ND	7	10	B6D0656	04/27/2016	04/27/16 12:52	
2-Chloroethyl vinyl ether	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
2-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
2-Hexanone	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
2-Propanol	ND	6	10	B6D0656	04/27/2016	04/27/16 12:52	
4-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
4-Ethyl Toluene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
4-Methyl-2-pentanone	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Acetone	**70**	6	10	B6D0656	04/27/2016	04/27/16 12:52	
Acetonitrile	ND	4	10	B6D0656	04/27/2016	04/27/16 12:52	
Acrolein	ND	6	10	B6D0656	04/27/2016	04/27/16 12:52	
Acrylonitrile	ND	5	10	B6D0656	04/27/2016	04/27/16 12:52	
Benzene	ND	8	10	B6D0656	04/27/2016	04/27/16 12:52	
Benzyl chloride	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Bromobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Bromodichloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-2 @ 5'

Lab ID: 1601497-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	30	10	B6D0656	04/27/2016	04/27/16 12:52	
Bromomethane	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Carbon disulfide	ND	8	10	B6D0656	04/27/2016	04/27/16 12:52	
Carbon tetrachloride	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Chlorobenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Chloroethane	ND	7	10	B6D0656	04/27/2016	04/27/16 12:52	
Chloroform	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Chloromethane	ND	5	10	B6D0656	04/27/2016	04/27/16 12:52	
cis-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
cis-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Cyclohexane	ND	9	10	B6D0656	04/27/2016	04/27/16 12:52	
Dibromochloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Dibromomethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Dichlorodifluoromethane	**50**	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Dichlorotetrafluoroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Ethanol	**6**	5	10	B6D0656	04/27/2016	04/27/16 12:52	
Ethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Freon-113	ND	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Hexachlorobutadiene	ND	30	10	B6D0656	04/27/2016	04/27/16 12:52	
Isopropylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
m,p-Xylene	ND	40	10	B6D0656	04/27/2016	04/27/16 12:52	
Methylene chloride	ND	9	10	B6D0656	04/27/2016	04/27/16 12:52	
MTBE	ND	9	10	B6D0656	04/27/2016	04/27/16 12:52	
n-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
n-Propylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Naphthalene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
o-Xylene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
p-Isopropyltoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
sec-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Styrene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
tert-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Tetrachloroethene	**270**	20	10	B6D0656	04/27/2016	04/27/16 12:52	
Toluene	ND	9	10	B6D0656	04/27/2016	04/27/16 12:52	
trans-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
trans-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Trichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 12:52	
Trichlorofluoromethane	**18000**	280	200	B6D0710	04/28/2016	04/28/16 20:19	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-2 @ 5'

Lab ID: 1601497-02

Volatile Organic Compounds in AIR by TO-15 (Canister) — **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	9	10	B6D0656	04/27/2016	04/27/16 12:52	
Vinyl chloride		ND	6	10	B6D0656	04/27/2016	04/27/16 12:52	
Surrogate: 4-Bromofluorobenzene	*100 %*		*79.2 - 147*		B6D0710	04/28/2016	*04/28/16 20:19*	
Surrogate: 4-Bromofluorobenzene	*101 %*		*79.2 - 147*		B6D0656	04/27/2016	*04/27/16 12:52*	

Gasoline Range Organics in Air by TO-3 — **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**21000**	10000	100	B6E0059	04/29/2016	04/29/16 13:08	
Surrogate: 4-Bromofluorobenzene	*110 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 13:08*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-3 @ 5'

Lab ID: 1601497-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,1,1-Trichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,1,2,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,1,2-Trichloroethane	**30**	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,1-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,1-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,1-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2,3-Trichloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2,4-Trichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2,4-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2-Dibromo-3-chloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2-Dibromoethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,2-Dichloropropane	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,3,5-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
1,3-Butadiene	ND	6	10	B6D0656	04/27/2016	04/27/16 13:30	
1,3-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,4-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
1,4-Dioxane	ND	9	10	B6D0656	04/27/2016	04/27/16 13:30	
2,2,4-Trimethylpentane	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
2-Butanone	ND	7	10	B6D0656	04/27/2016	04/27/16 13:30	
2-Chloroethyl vinyl ether	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
2-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
2-Hexanone	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
2-Propanol	ND	6	10	B6D0656	04/27/2016	04/27/16 13:30	
4-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
4-Ethyl Toluene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
4-Methyl-2-pentanone	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Acetone	**60**	6	10	B6D0656	04/27/2016	04/27/16 13:30	
Acetonitrile	ND	4	10	B6D0656	04/27/2016	04/27/16 13:30	
Acrolein	ND	6	10	B6D0656	04/27/2016	04/27/16 13:30	
Acrylonitrile	ND	5	10	B6D0656	04/27/2016	04/27/16 13:30	
Benzene	ND	8	10	B6D0656	04/27/2016	04/27/16 13:30	
Benzyl chloride	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Bromobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Bromodichloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-3 @ 5'

Lab ID: 1601497-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	30	10	B6D0656	04/27/2016	04/27/16 13:30	
Bromomethane	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Carbon disulfide	ND	8	10	B6D0656	04/27/2016	04/27/16 13:30	
Carbon tetrachloride	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Chlorobenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Chloroethane	ND	7	10	B6D0656	04/27/2016	04/27/16 13:30	
Chloroform	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Chloromethane	ND	5	10	B6D0656	04/27/2016	04/27/16 13:30	
cis-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
cis-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Cyclohexane	ND	9	10	B6D0656	04/27/2016	04/27/16 13:30	
Dibromochloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Dibromomethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Dichlorodifluoromethane	**50**	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Dichlorotetrafluoroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Ethanol	ND	5	10	B6D0656	04/27/2016	04/27/16 13:30	
Ethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Freon-113	ND	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Hexachlorobutadiene	ND	30	10	B6D0656	04/27/2016	04/27/16 13:30	
Isopropylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
m,p-Xylene	ND	40	10	B6D0656	04/27/2016	04/27/16 13:30	
Methylene chloride	ND	9	10	B6D0656	04/27/2016	04/27/16 13:30	
MTBE	ND	9	10	B6D0656	04/27/2016	04/27/16 13:30	
n-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
n-Propylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Naphthalene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
o-Xylene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
p-Isopropyltoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
sec-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Styrene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
tert-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Tetrachloroethene	**390**	20	10	B6D0656	04/27/2016	04/27/16 13:30	
Toluene	ND	9	10	B6D0656	04/27/2016	04/27/16 13:30	
trans-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
trans-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Trichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 13:30	
Trichlorofluoromethane	**26000**	1400	1000	B6D0710	04/29/2016	04/29/16 09:06	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-3 @ 5'

Lab ID: 1601497-03

Volatile Organic Compounds in AIR by TO-15 (Canister) — **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	9	10	B6D0656	04/27/2016	04/27/16 13:30	
Vinyl chloride		ND	6	10	B6D0656	04/27/2016	04/27/16 13:30	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B6D0710	04/29/2016	*04/29/16 09:06*	
Surrogate: 4-Bromofluorobenzene	*103 %*		*79.2 - 147*		B6D0656	04/27/2016	*04/27/16 13:30*	

Gasoline Range Organics in Air by TO-3 — **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**27000**	20000	200	B6E0059	04/29/2016	04/29/16 13:46	
Surrogate: 4-Bromofluorobenzene	*106 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 13:46*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-4 @ 5'

Lab ID: 1601497-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,1,1-Trichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,1,2,2-Tetrachloroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,1,2-Trichloroethane	**80**	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,1-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,1-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,1-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2,3-Trichloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2,4-Trichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2,4-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2-Dibromo-3-chloropropane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2-Dibromoethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2-Dichloroethane	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,2-Dichloropropane	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,3,5-Trimethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
1,3-Butadiene	ND	6	10	B6D0656	04/27/2016	04/27/16 14:07	
1,3-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,4-Dichlorobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
1,4-Dioxane	ND	9	10	B6D0656	04/27/2016	04/27/16 14:07	
2,2,4-Trimethylpentane	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
2-Butanone	ND	7	10	B6D0656	04/27/2016	04/27/16 14:07	
2-Chloroethyl vinyl ether	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
2-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
2-Hexanone	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
2-Propanol	ND	6	10	B6D0656	04/27/2016	04/27/16 14:07	
4-Chlorotoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
4-Ethyl Toluene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
4-Methyl-2-pentanone	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Acetone	**60**	6	10	B6D0656	04/27/2016	04/27/16 14:07	
Acetonitrile	ND	4	10	B6D0656	04/27/2016	04/27/16 14:07	
Acrolein	ND	6	10	B6D0656	04/27/2016	04/27/16 14:07	
Acrylonitrile	ND	5	10	B6D0656	04/27/2016	04/27/16 14:07	
Benzene	ND	8	10	B6D0656	04/27/2016	04/27/16 14:07	
Benzyl chloride	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Bromobenzene	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Bromodichloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-4 @ 5'

Lab ID: 1601497-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	30	10	B6D0656	04/27/2016	04/27/16 14:07	
Bromomethane	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Carbon disulfide	ND	8	10	B6D0656	04/27/2016	04/27/16 14:07	
Carbon tetrachloride	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Chlorobenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Chloroethane	ND	7	10	B6D0656	04/27/2016	04/27/16 14:07	
Chloroform	**10**	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Chloromethane	ND	5	10	B6D0656	04/27/2016	04/27/16 14:07	
cis-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
cis-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Cyclohexane	ND	9	10	B6D0656	04/27/2016	04/27/16 14:07	
Dibromochloromethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Dibromomethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Dichlorodifluoromethane	**60**	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Dichlorotetrafluoroethane	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Ethanol	ND	5	10	B6D0656	04/27/2016	04/27/16 14:07	
Ethylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Freon-113	ND	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Hexachlorobutadiene	ND	30	10	B6D0656	04/27/2016	04/27/16 14:07	
Isopropylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
m,p-Xylene	ND	40	10	B6D0656	04/27/2016	04/27/16 14:07	
Methylene chloride	ND	9	10	B6D0656	04/27/2016	04/27/16 14:07	
MTBE	ND	9	10	B6D0656	04/27/2016	04/27/16 14:07	
n-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
n-Propylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Naphthalene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
o-Xylene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
p-Isopropyltoluene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
sec-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Styrene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
tert-Butylbenzene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Tetrachloroethene	**1000**	20	10	B6D0656	04/27/2016	04/27/16 14:07	
Toluene	ND	9	10	B6D0656	04/27/2016	04/27/16 14:07	
trans-1,2-Dichloroethene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
trans-1,3-Dichloropropene	ND	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Trichloroethene	**20**	10	10	B6D0656	04/27/2016	04/27/16 14:07	
Trichlorofluoromethane	**4700**	140	100	B6D0710	04/28/2016	04/28/16 21:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-4 @ 5'

Lab ID: 1601497-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	9	10	B6D0656	04/27/2016	04/27/16 14:07	
Vinyl chloride		ND	6	10	B6D0656	04/27/2016	04/27/16 14:07	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B6D0710	04/28/2016	*04/28/16 21:38*	
Surrogate: 4-Bromofluorobenzene	*103 %*		*79.2 - 147*		B6D0656	04/27/2016	*04/27/16 14:07*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**6500**	4100	40	B6E0059	04/29/2016	04/29/16 15:04	
Surrogate: 4-Bromofluorobenzene	*105 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 15:04*	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-5 @ 3'

Lab ID: 1601497-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:18	
1,1,1-Trichloroethane	ND	140	100	B6D0710	04/28/2016	04/28/16 22:18	
1,1,2,2-Tetrachloroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:18	
1,1,2-Trichloroethane	**300**	140	100	B6D0710	04/28/2016	04/28/16 22:18	
1,1-Dichloroethane	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
1,1-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
1,1-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2,3-Trichloropropane	ND	150	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2,4-Trichlorobenzene	ND	190	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2,4-Trimethylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2-Dibromo-3-chloropropane	ND	240	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2-Dibromoethane	ND	190	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2-Dichloroethane	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
1,2-Dichloropropane	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
1,3,5-Trimethylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
1,3-Butadiene	ND	60	100	B6D0710	04/28/2016	04/28/16 22:18	
1,3-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 22:18	
1,4-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 22:18	
1,4-Dioxane	ND	90	100	B6D0710	04/28/2016	04/28/16 22:18	
2,2,4-Trimethylpentane	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
2-Butanone	ND	70	100	B6D0710	04/28/2016	04/28/16 22:18	
2-Chloroethyl vinyl ether	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
2-Chlorotoluene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:18	
2-Hexanone	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
2-Propanol	ND	60	100	B6D0710	04/28/2016	04/28/16 22:18	
4-Chlorotoluene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:18	
4-Ethyl Toluene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
4-Methyl-2-pentanone	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
Acetone	**350**	60	100	B6D0710	04/28/2016	04/28/16 22:18	
Acetonitrile	ND	40	100	B6D0710	04/28/2016	04/28/16 22:18	
Acrolein	ND	60	100	B6D0710	04/28/2016	04/28/16 22:18	
Acrylonitrile	ND	50	100	B6D0710	04/28/2016	04/28/16 22:18	
Benzene	ND	80	100	B6D0710	04/28/2016	04/28/16 22:18	
Benzyl chloride	ND	130	100	B6D0710	04/28/2016	04/28/16 22:18	
Bromobenzene	ND	160	100	B6D0710	04/28/2016	04/28/16 22:18	
Bromodichloromethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-5 @ 3'

Lab ID: 1601497-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	260	100	B6D0710	04/28/2016	04/28/16 22:18	
Bromomethane	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
Carbon disulfide	ND	80	100	B6D0710	04/28/2016	04/28/16 22:18	
Carbon tetrachloride	ND	160	100	B6D0710	04/28/2016	04/28/16 22:18	
Chlorobenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
Chloroethane	ND	70	100	B6D0710	04/28/2016	04/28/16 22:18	
Chloroform	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
Chloromethane	ND	50	100	B6D0710	04/28/2016	04/28/16 22:18	
cis-1,2-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
cis-1,3-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
Cyclohexane	**90**	90	100	B6D0710	04/28/2016	04/28/16 22:18	
Dibromochloromethane	ND	210	100	B6D0710	04/28/2016	04/28/16 22:18	
Dibromomethane	ND	180	100	B6D0710	04/28/2016	04/28/16 22:18	
Dichlorodifluoromethane	**160**	120	100	B6D0710	04/28/2016	04/28/16 22:18	
Dichlorotetrafluoroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:18	
Ethanol	ND	50	100	B6D0710	04/28/2016	04/28/16 22:18	
Ethylbenzene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
Freon-113	ND	190	100	B6D0710	04/28/2016	04/28/16 22:18	
Hexachlorobutadiene	ND	270	100	B6D0710	04/28/2016	04/28/16 22:18	
Isopropylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
m,p-Xylene	ND	430	100	B6D0710	04/28/2016	04/28/16 22:18	
Methylene chloride	ND	90	100	B6D0710	04/28/2016	04/28/16 22:18	
MTBE	ND	90	100	B6D0710	04/28/2016	04/28/16 22:18	
n-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:18	
n-Propylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:18	
Naphthalene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:18	
o-Xylene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
p-Isopropyltoluene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:18	
sec-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:18	
Styrene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
tert-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:18	
Tetrachloroethene	**4700**	170	100	B6D0710	04/28/2016	04/28/16 22:18	
Toluene	ND	90	100	B6D0710	04/28/2016	04/28/16 22:18	
trans-1,2-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 22:18	
trans-1,3-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:18	
Trichloroethene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:18	
Trichlorofluoromethane	**3100**	140	100	B6D0710	04/28/2016	04/28/16 22:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-5 @ 3'

Lab ID: 1601497-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	90	100	B6D0710	04/28/2016	04/28/16 22:18	
Vinyl chloride		ND	60	100	B6D0710	04/28/2016	04/28/16 22:18	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B6D0710	04/28/2016	*04/28/16 22:18*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**7600**	4100	40	B6E0059	04/29/2016	04/29/16 15:43	
Surrogate: 4-Bromofluorobenzene	*111 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 15:43*	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-6 @ 5'

Lab ID: 1601497-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:57	
1,1,1-Trichloroethane	ND	140	100	B6D0710	04/28/2016	04/28/16 22:57	
1,1,2,2-Tetrachloroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:57	
1,1,2-Trichloroethane	ND	140	100	B6D0710	04/28/2016	04/28/16 22:57	
1,1-Dichloroethane	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
1,1-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
1,1-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2,3-Trichloropropane	ND	150	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2,4-Trichlorobenzene	ND	190	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2,4-Trimethylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2-Dibromo-3-chloropropane	ND	240	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2-Dibromoethane	ND	190	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2-Dichloroethane	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
1,2-Dichloropropane	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
1,3,5-Trimethylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
1,3-Butadiene	ND	60	100	B6D0710	04/28/2016	04/28/16 22:57	
1,3-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 22:57	
1,4-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 22:57	
1,4-Dioxane	ND	90	100	B6D0710	04/28/2016	04/28/16 22:57	
2,2,4-Trimethylpentane	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
2-Butanone	ND	70	100	B6D0710	04/28/2016	04/28/16 22:57	
2-Chloroethyl vinyl ether	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
2-Chlorotoluene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:57	
2-Hexanone	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
2-Propanol	ND	60	100	B6D0710	04/28/2016	04/28/16 22:57	
4-Chlorotoluene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:57	
4-Ethyl Toluene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
4-Methyl-2-pentanone	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
Acetone	**150**	60	100	B6D0710	04/28/2016	04/28/16 22:57	
Acetonitrile	ND	40	100	B6D0710	04/28/2016	04/28/16 22:57	
Acrolein	ND	60	100	B6D0710	04/28/2016	04/28/16 22:57	
Acrylonitrile	ND	50	100	B6D0710	04/28/2016	04/28/16 22:57	
Benzene	ND	80	100	B6D0710	04/28/2016	04/28/16 22:57	
Benzyl chloride	ND	130	100	B6D0710	04/28/2016	04/28/16 22:57	
Bromobenzene	ND	160	100	B6D0710	04/28/2016	04/28/16 22:57	
Bromodichloromethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:57	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-6 @ 5'

Lab ID: 1601497-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	260	100	B6D0710	04/28/2016	04/28/16 22:57	
Bromomethane	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
Carbon disulfide	ND	80	100	B6D0710	04/28/2016	04/28/16 22:57	
Carbon tetrachloride	ND	160	100	B6D0710	04/28/2016	04/28/16 22:57	
Chlorobenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
Chloroethane	ND	70	100	B6D0710	04/28/2016	04/28/16 22:57	
Chloroform	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
Chloromethane	ND	50	100	B6D0710	04/28/2016	04/28/16 22:57	
cis-1,2-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
cis-1,3-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
Cyclohexane	ND	90	100	B6D0710	04/28/2016	04/28/16 22:57	
Dibromochloromethane	ND	210	100	B6D0710	04/28/2016	04/28/16 22:57	
Dibromomethane	ND	180	100	B6D0710	04/28/2016	04/28/16 22:57	
Dichlorodifluoromethane	**170**	120	100	B6D0710	04/28/2016	04/28/16 22:57	
Dichlorotetrafluoroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 22:57	
Ethanol	ND	50	100	B6D0710	04/28/2016	04/28/16 22:57	
Ethylbenzene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
Freon-113	ND	190	100	B6D0710	04/28/2016	04/28/16 22:57	
Hexachlorobutadiene	ND	270	100	B6D0710	04/28/2016	04/28/16 22:57	
Isopropylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
m,p-Xylene	ND	430	100	B6D0710	04/28/2016	04/28/16 22:57	
Methylene chloride	ND	90	100	B6D0710	04/28/2016	04/28/16 22:57	
MTBE	ND	90	100	B6D0710	04/28/2016	04/28/16 22:57	
n-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:57	
n-Propylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 22:57	
Naphthalene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:57	
o-Xylene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
p-Isopropyltoluene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:57	
sec-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:57	
Styrene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
tert-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 22:57	
Tetrachloroethene	**1400**	170	100	B6D0710	04/28/2016	04/28/16 22:57	
Toluene	ND	90	100	B6D0710	04/28/2016	04/28/16 22:57	
trans-1,2-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 22:57	
trans-1,3-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 22:57	
Trichloroethene	ND	130	100	B6D0710	04/28/2016	04/28/16 22:57	
Trichlorofluoromethane	**4400**	140	100	B6D0710	04/28/2016	04/28/16 22:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-6 @ 5'

Lab ID: 1601497-06

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	90	100	B6D0710	04/28/2016	04/28/16 22:57	
Vinyl chloride		ND	60	100	B6D0710	04/28/2016	04/28/16 22:57	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B6D0710	04/28/2016	*04/28/16 22:57*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**6400**	4100	40	B6E0059	04/29/2016	04/29/16 16:22	
Surrogate: 4-Bromofluorobenzene	*111 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 16:22*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-7 @ 3'

Lab ID: 1601497-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 23:38	
1,1,1-Trichloroethane	ND	140	100	B6D0710	04/28/2016	04/28/16 23:38	
1,1,2,2-Tetrachloroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 23:38	
1,1,2-Trichloroethane	ND	140	100	B6D0710	04/28/2016	04/28/16 23:38	
1,1-Dichloroethane	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
1,1-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
1,1-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2,3-Trichloropropane	ND	150	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2,4-Trichlorobenzene	ND	190	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2,4-Trimethylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2-Dibromo-3-chloropropane	ND	240	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2-Dibromoethane	ND	190	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2-Dichloroethane	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
1,2-Dichloropropane	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
1,3,5-Trimethylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
1,3-Butadiene	ND	60	100	B6D0710	04/28/2016	04/28/16 23:38	
1,3-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 23:38	
1,4-Dichlorobenzene	ND	150	100	B6D0710	04/28/2016	04/28/16 23:38	
1,4-Dioxane	ND	90	100	B6D0710	04/28/2016	04/28/16 23:38	
2,2,4-Trimethylpentane	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
2-Butanone	ND	70	100	B6D0710	04/28/2016	04/28/16 23:38	
2-Chloroethyl vinyl ether	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
2-Chlorotoluene	ND	130	100	B6D0710	04/28/2016	04/28/16 23:38	
2-Hexanone	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
2-Propanol	ND	60	100	B6D0710	04/28/2016	04/28/16 23:38	
4-Chlorotoluene	ND	130	100	B6D0710	04/28/2016	04/28/16 23:38	
4-Ethyl Toluene	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
4-Methyl-2-pentanone	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
Acetone	**630**	60	100	B6D0710	04/28/2016	04/28/16 23:38	
Acetonitrile	ND	40	100	B6D0710	04/28/2016	04/28/16 23:38	
Acrolein	ND	60	100	B6D0710	04/28/2016	04/28/16 23:38	
Acrylonitrile	ND	50	100	B6D0710	04/28/2016	04/28/16 23:38	
Benzene	ND	80	100	B6D0710	04/28/2016	04/28/16 23:38	
Benzyl chloride	ND	130	100	B6D0710	04/28/2016	04/28/16 23:38	
Bromobenzene	ND	160	100	B6D0710	04/28/2016	04/28/16 23:38	
Bromodichloromethane	ND	170	100	B6D0710	04/28/2016	04/28/16 23:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-7 @ 3'

Lab ID: 1601497-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	260	100	B6D0710	04/28/2016	04/28/16 23:38	
Bromomethane	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
Carbon disulfide	ND	80	100	B6D0710	04/28/2016	04/28/16 23:38	
Carbon tetrachloride	ND	160	100	B6D0710	04/28/2016	04/28/16 23:38	
Chlorobenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
Chloroethane	ND	70	100	B6D0710	04/28/2016	04/28/16 23:38	
Chloroform	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
Chloromethane	ND	50	100	B6D0710	04/28/2016	04/28/16 23:38	
cis-1,2-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
cis-1,3-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
Cyclohexane	ND	90	100	B6D0710	04/28/2016	04/28/16 23:38	
Dibromochloromethane	ND	210	100	B6D0710	04/28/2016	04/28/16 23:38	
Dibromomethane	ND	180	100	B6D0710	04/28/2016	04/28/16 23:38	
Dichlorodifluoromethane	**190**	120	100	B6D0710	04/28/2016	04/28/16 23:38	
Dichlorotetrafluoroethane	ND	170	100	B6D0710	04/28/2016	04/28/16 23:38	
Ethanol	ND	50	100	B6D0710	04/28/2016	04/28/16 23:38	
Ethylbenzene	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
Freon-113	ND	190	100	B6D0710	04/28/2016	04/28/16 23:38	
Hexachlorobutadiene	ND	270	100	B6D0710	04/28/2016	04/28/16 23:38	
Isopropylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
m,p-Xylene	ND	430	100	B6D0710	04/28/2016	04/28/16 23:38	
Methylene chloride	ND	90	100	B6D0710	04/28/2016	04/28/16 23:38	
MTBE	ND	90	100	B6D0710	04/28/2016	04/28/16 23:38	
n-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 23:38	
n-Propylbenzene	ND	120	100	B6D0710	04/28/2016	04/28/16 23:38	
Naphthalene	ND	130	100	B6D0710	04/28/2016	04/28/16 23:38	
o-Xylene	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
p-Isopropyltoluene	ND	140	100	B6D0710	04/28/2016	04/28/16 23:38	
sec-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 23:38	
Styrene	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
tert-Butylbenzene	ND	140	100	B6D0710	04/28/2016	04/28/16 23:38	
Tetrachloroethene	**4300**	170	100	B6D0710	04/28/2016	04/28/16 23:38	
Toluene	ND	90	100	B6D0710	04/28/2016	04/28/16 23:38	
trans-1,2-Dichloroethene	ND	100	100	B6D0710	04/28/2016	04/28/16 23:38	
trans-1,3-Dichloropropene	ND	110	100	B6D0710	04/28/2016	04/28/16 23:38	
Trichloroethene	ND	130	100	B6D0710	04/28/2016	04/28/16 23:38	
Trichlorofluoromethane	**3400**	140	100	B6D0710	04/28/2016	04/28/16 23:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-7 @ 3'

Lab ID: 1601497-07

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	90	100	B6D0710	04/28/2016	04/28/16 23:38	
Vinyl chloride		ND	60	100	B6D0710	04/28/2016	04/28/16 23:38	
Surrogate: 4-Bromofluorobenzene	*108 %*		*79.2 - 147*		B6D0710	04/28/2016	*04/28/16 23:38*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**7500**	4100	40	B6E0059	04/29/2016	04/29/16 17:40	
Surrogate: 4-Bromofluorobenzene	*106 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 17:40*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-8 @ 5'

Lab ID: 1601497-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	170	100	B6D0710	04/29/2016	04/29/16 00:18	
1,1,1-Trichloroethane	ND	140	100	B6D0710	04/29/2016	04/29/16 00:18	
1,1,2,2-Tetrachloroethane	ND	170	100	B6D0710	04/29/2016	04/29/16 00:18	
1,1,2-Trichloroethane	ND	140	100	B6D0710	04/29/2016	04/29/16 00:18	
1,1-Dichloroethane	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
1,1-Dichloroethene	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
1,1-Dichloropropene	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2,3-Trichloropropane	ND	150	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2,4-Trichlorobenzene	ND	190	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2,4-Trimethylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2-Dibromo-3-chloropropane	ND	240	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2-Dibromoethane	ND	190	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2-Dichlorobenzene	ND	150	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2-Dichloroethane	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
1,2-Dichloropropane	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
1,3,5-Trimethylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
1,3-Butadiene	ND	60	100	B6D0710	04/29/2016	04/29/16 00:18	
1,3-Dichlorobenzene	ND	150	100	B6D0710	04/29/2016	04/29/16 00:18	
1,4-Dichlorobenzene	ND	150	100	B6D0710	04/29/2016	04/29/16 00:18	
1,4-Dioxane	ND	90	100	B6D0710	04/29/2016	04/29/16 00:18	
2,2,4-Trimethylpentane	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
2-Butanone	ND	70	100	B6D0710	04/29/2016	04/29/16 00:18	
2-Chloroethyl vinyl ether	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
2-Chlorotoluene	ND	130	100	B6D0710	04/29/2016	04/29/16 00:18	
2-Hexanone	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
2-Propanol	ND	60	100	B6D0710	04/29/2016	04/29/16 00:18	
4-Chlorotoluene	ND	130	100	B6D0710	04/29/2016	04/29/16 00:18	
4-Ethyl Toluene	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
4-Methyl-2-pentanone	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
Acetone	**170**	60	100	B6D0710	04/29/2016	04/29/16 00:18	
Acetonitrile	ND	40	100	B6D0710	04/29/2016	04/29/16 00:18	
Acrolein	ND	60	100	B6D0710	04/29/2016	04/29/16 00:18	
Acrylonitrile	ND	50	100	B6D0710	04/29/2016	04/29/16 00:18	
Benzene	ND	80	100	B6D0710	04/29/2016	04/29/16 00:18	
Benzyl chloride	ND	130	100	B6D0710	04/29/2016	04/29/16 00:18	
Bromobenzene	ND	160	100	B6D0710	04/29/2016	04/29/16 00:18	
Bromodichloromethane	ND	170	100	B6D0710	04/29/2016	04/29/16 00:18	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-8 @ 5'

Lab ID: 1601497-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	260	100	B6D0710	04/29/2016	04/29/16 00:18	
Bromomethane	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
Carbon disulfide	ND	80	100	B6D0710	04/29/2016	04/29/16 00:18	
Carbon tetrachloride	ND	160	100	B6D0710	04/29/2016	04/29/16 00:18	
Chlorobenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
Chloroethane	ND	70	100	B6D0710	04/29/2016	04/29/16 00:18	
Chloroform	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
Chloromethane	ND	50	100	B6D0710	04/29/2016	04/29/16 00:18	
cis-1,2-Dichloroethene	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
cis-1,3-Dichloropropene	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
Cyclohexane	**100**	90	100	B6D0710	04/29/2016	04/29/16 00:18	
Dibromochloromethane	ND	210	100	B6D0710	04/29/2016	04/29/16 00:18	
Dibromomethane	ND	180	100	B6D0710	04/29/2016	04/29/16 00:18	
Dichlorodifluoromethane	**610**	120	100	B6D0710	04/29/2016	04/29/16 00:18	
Dichlorotetrafluoroethane	ND	170	100	B6D0710	04/29/2016	04/29/16 00:18	
Ethanol	ND	50	100	B6D0710	04/29/2016	04/29/16 00:18	
Ethylbenzene	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
Freon-113	ND	190	100	B6D0710	04/29/2016	04/29/16 00:18	
Hexachlorobutadiene	ND	270	100	B6D0710	04/29/2016	04/29/16 00:18	
Isopropylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
m,p-Xylene	ND	430	100	B6D0710	04/29/2016	04/29/16 00:18	
Methylene chloride	ND	90	100	B6D0710	04/29/2016	04/29/16 00:18	
MTBE	ND	90	100	B6D0710	04/29/2016	04/29/16 00:18	
n-Butylbenzene	ND	140	100	B6D0710	04/29/2016	04/29/16 00:18	
n-Propylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 00:18	
Naphthalene	ND	130	100	B6D0710	04/29/2016	04/29/16 00:18	
o-Xylene	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
p-Isopropyltoluene	ND	140	100	B6D0710	04/29/2016	04/29/16 00:18	
sec-Butylbenzene	ND	140	100	B6D0710	04/29/2016	04/29/16 00:18	
Styrene	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
tert-Butylbenzene	ND	140	100	B6D0710	04/29/2016	04/29/16 00:18	
Tetrachloroethene	**2600**	170	100	B6D0710	04/29/2016	04/29/16 00:18	
Toluene	ND	90	100	B6D0710	04/29/2016	04/29/16 00:18	
trans-1,2-Dichloroethene	ND	100	100	B6D0710	04/29/2016	04/29/16 00:18	
trans-1,3-Dichloropropene	ND	110	100	B6D0710	04/29/2016	04/29/16 00:18	
Trichloroethene	ND	130	100	B6D0710	04/29/2016	04/29/16 00:18	
Trichlorofluoromethane	**3100**	140	100	B6D0710	04/29/2016	04/29/16 00:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-8 @ 5'

Lab ID: 1601497-08

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	90	100	B6D0710	04/29/2016	04/29/16 00:18	
Vinyl chloride		ND	60	100	B6D0710	04/29/2016	04/29/16 00:18	
Surrogate: 4-Bromofluorobenzene	*118 %*		*79.2 - 147*		B6D0710	04/29/2016	*04/29/16 00:18*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5800**	4100	40	B6E0059	04/29/2016	04/29/16 18:20	
Surrogate: 4-Bromofluorobenzene	*107 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 18:20*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-9 @ 5'

Lab ID: 1601497-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,1,1-Trichloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,1,2,2-Tetrachloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,1,2-Trichloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,1-Dichloroethane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,1-Dichloroethene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,1-Dichloropropene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2,3-Trichloropropane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2,4-Trichlorobenzene	ND	40	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2,4-Trimethylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2-Dibromo-3-chloropropane	ND	50	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2-Dibromoethane	ND	40	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2-Dichlorobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2-Dichloroethane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,2-Dichloropropane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,3,5-Trimethylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
1,3-Butadiene	ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
1,3-Dichlorobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,4-Dichlorobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
1,4-Dioxane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
2,2,4-Trimethylpentane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
2-Butanone	ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
2-Chloroethyl vinyl ether	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
2-Chlorotoluene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
2-Hexanone	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
2-Propanol	**120**	10	20	B6D0710	04/29/2016	04/29/16 07:45	
4-Chlorotoluene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
4-Ethyl Toluene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
4-Methyl-2-pentanone	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Acetone	**210**	10	20	B6D0710	04/29/2016	04/29/16 07:45	
Acetonitrile	ND	8	20	B6D0710	04/29/2016	04/29/16 07:45	
Acrolein	ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
Acrylonitrile	ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
Benzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Benzyl chloride	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Bromobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Bromodichloromethane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-9 @ 5'

Lab ID: 1601497-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	50	20	B6D0710	04/29/2016	04/29/16 07:45	
Bromomethane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Carbon disulfide	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Carbon tetrachloride	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Chlorobenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Chloroethane	ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
Chloroform	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Chloromethane	ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
cis-1,2-Dichloroethene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
cis-1,3-Dichloropropene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Cyclohexane	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Dibromochloromethane	ND	40	20	B6D0710	04/29/2016	04/29/16 07:45	
Dibromomethane	ND	40	20	B6D0710	04/29/2016	04/29/16 07:45	
Dichlorodifluoromethane	**40**	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Dichlorotetrafluoroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Ethanol	**210**	9	20	B6D0710	04/29/2016	04/29/16 07:45	
Ethylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Freon-113	ND	40	20	B6D0710	04/29/2016	04/29/16 07:45	
Hexachlorobutadiene	ND	50	20	B6D0710	04/29/2016	04/29/16 07:45	
Isopropylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
m,p-Xylene	ND	90	20	B6D0710	04/29/2016	04/29/16 07:45	
Methylene chloride	**370**	20	20	B6D0710	04/29/2016	04/29/16 07:45	
MTBE	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
n-Butylbenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
n-Propylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Naphthalene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
o-Xylene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
p-Isopropyltoluene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
sec-Butylbenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Styrene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
tert-Butylbenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Tetrachloroethene	**120**	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Toluene	**20**	20	20	B6D0710	04/29/2016	04/29/16 07:45	
trans-1,2-Dichloroethene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
trans-1,3-Dichloropropene	ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Trichloroethene	ND	30	20	B6D0710	04/29/2016	04/29/16 07:45	
Trichlorofluoromethane	**480**	30	20	B6D0710	04/29/2016	04/29/16 07:45	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-9 @ 5'

Lab ID: 1601497-09

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	20	20	B6D0710	04/29/2016	04/29/16 07:45	
Vinyl chloride		ND	10	20	B6D0710	04/29/2016	04/29/16 07:45	
Surrogate: 4-Bromofluorobenzene	*110 %*		*79.2 - 147*		B6D0710	04/29/2016	*04/29/16 07:45*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2800**	1000	10	B6E0080	05/03/2016	05/03/16 16:35	
Surrogate: 4-Bromofluorobenzene	*109 %*		*70 - 130*		B6E0080	05/03/2016	*05/03/16 16:35*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-4 @ 5' Dup

Lab ID: 1601497-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,1,1-Trichloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,1,2,2-Tetrachloroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,1,2-Trichloroethane	**40**	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,1-Dichloroethane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,1-Dichloroethene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,1-Dichloropropene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2,3-Trichloropropane	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2,4-Trichlorobenzene	ND	40	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2,4-Trimethylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2-Dibromo-3-chloropropane	ND	50	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2-Dibromoethane	ND	40	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2-Dichlorobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2-Dichloroethane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,2-Dichloropropane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,3,5-Trimethylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
1,3-Butadiene	ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
1,3-Dichlorobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,4-Dichlorobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
1,4-Dioxane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
2,2,4-Trimethylpentane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
2-Butanone	ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
2-Chloroethyl vinyl ether	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
2-Chlorotoluene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
2-Hexanone	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
2-Propanol	**140**	10	20	B6D0710	04/29/2016	04/29/16 08:27	
4-Chlorotoluene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
4-Ethyl Toluene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
4-Methyl-2-pentanone	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Acetone	**90**	10	20	B6D0710	04/29/2016	04/29/16 08:27	
Acetonitrile	ND	8	20	B6D0710	04/29/2016	04/29/16 08:27	
Acrolein	ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
Acrylonitrile	ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
Benzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Benzyl chloride	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Bromobenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Bromodichloromethane	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-4 @ 5' Dup

Lab ID: 1601497-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	50	20	B6D0710	04/29/2016	04/29/16 08:27	
Bromomethane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Carbon disulfide	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Carbon tetrachloride	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Chlorobenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Chloroethane	ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
Chloroform	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Chloromethane	ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
cis-1,2-Dichloroethene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
cis-1,3-Dichloropropene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Cyclohexane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Dibromochloromethane	ND	40	20	B6D0710	04/29/2016	04/29/16 08:27	
Dibromomethane	ND	40	20	B6D0710	04/29/2016	04/29/16 08:27	
Dichlorodifluoromethane	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Dichlorotetrafluoroethane	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Ethanol	**20**	9	20	B6D0710	04/29/2016	04/29/16 08:27	
Ethylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Freon-113	ND	40	20	B6D0710	04/29/2016	04/29/16 08:27	
Hexachlorobutadiene	ND	50	20	B6D0710	04/29/2016	04/29/16 08:27	
Isopropylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
m,p-Xylene	ND	90	20	B6D0710	04/29/2016	04/29/16 08:27	
Methylene chloride	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
MTBE	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
n-Butylbenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
n-Propylbenzene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Naphthalene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
o-Xylene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
p-Isopropyltoluene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
sec-Butylbenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Styrene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
tert-Butylbenzene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Tetrachloroethene	**480**	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Toluene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
trans-1,2-Dichloroethene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
trans-1,3-Dichloropropene	ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Trichloroethene	ND	30	20	B6D0710	04/29/2016	04/29/16 08:27	
Trichlorofluoromethane	**2200**	30	20	B6D0710	04/29/2016	04/29/16 08:27	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-4 @ 5' Dup

Lab ID: 1601497-10

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	20	20	B6D0710	04/29/2016	04/29/16 08:27	
Vinyl chloride		ND	10	20	B6D0710	04/29/2016	04/29/16 08:27	
Surrogate: 4-Bromofluorobenzene	*117 %*		*79.2 - 147*		B6D0710	04/29/2016	*04/29/16 08:27*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2000**	1000	10	B6E0080	05/03/2016	05/03/16 17:12	
Surrogate: 4-Bromofluorobenzene	*107 %*		*70 - 130*		B6E0080	05/03/2016	*05/03/16 17:12*	

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

Client Sample ID P-20 VP-9 @ 5' Dup

Lab ID: 1601497-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	170	100	B6D0710	04/29/2016	04/29/16 02:20	
1,1,1-Trichloroethane	ND	140	100	B6D0710	04/29/2016	04/29/16 02:20	
1,1,2,2-Tetrachloroethane	ND	170	100	B6D0710	04/29/2016	04/29/16 02:20	
1,1,2-Trichloroethane	ND	140	100	B6D0710	04/29/2016	04/29/16 02:20	
1,1-Dichloroethane	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
1,1-Dichloroethene	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
1,1-Dichloropropene	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2,3-Trichloropropane	ND	150	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2,4-Trichlorobenzene	ND	190	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2,4-Trimethylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2-Dibromo-3-chloropropane	ND	240	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2-Dibromoethane	ND	190	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2-Dichlorobenzene	ND	150	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2-Dichloroethane	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
1,2-Dichloropropane	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
1,3,5-Trimethylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
1,3-Butadiene	ND	60	100	B6D0710	04/29/2016	04/29/16 02:20	
1,3-Dichlorobenzene	ND	150	100	B6D0710	04/29/2016	04/29/16 02:20	
1,4-Dichlorobenzene	ND	150	100	B6D0710	04/29/2016	04/29/16 02:20	
1,4-Dioxane	ND	90	100	B6D0710	04/29/2016	04/29/16 02:20	
2,2,4-Trimethylpentane	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
2-Butanone	ND	70	100	B6D0710	04/29/2016	04/29/16 02:20	
2-Chloroethyl vinyl ether	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
2-Chlorotoluene	ND	130	100	B6D0710	04/29/2016	04/29/16 02:20	
2-Hexanone	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
2-Propanol	ND	60	100	B6D0710	04/29/2016	04/29/16 02:20	
4-Chlorotoluene	ND	130	100	B6D0710	04/29/2016	04/29/16 02:20	
4-Ethyl Toluene	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
4-Methyl-2-pentanone	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
Acetone	ND	60	100	B6D0710	04/29/2016	04/29/16 02:20	
Acetonitrile	ND	40	100	B6D0710	04/29/2016	04/29/16 02:20	
Acrolein	ND	60	100	B6D0710	04/29/2016	04/29/16 02:20	
Acrylonitrile	ND	50	100	B6D0710	04/29/2016	04/29/16 02:20	
Benzene	ND	80	100	B6D0710	04/29/2016	04/29/16 02:20	
Benzyl chloride	ND	130	100	B6D0710	04/29/2016	04/29/16 02:20	
Bromobenzene	ND	160	100	B6D0710	04/29/2016	04/29/16 02:20	
Bromodichloromethane	ND	170	100	B6D0710	04/29/2016	04/29/16 02:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-9 @ 5' Dup
Lab ID: 1601497-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	260	100	B6D0710	04/29/2016	04/29/16 02:20	
Bromomethane	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
Carbon disulfide	ND	80	100	B6D0710	04/29/2016	04/29/16 02:20	
Carbon tetrachloride	ND	160	100	B6D0710	04/29/2016	04/29/16 02:20	
Chlorobenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
Chloroethane	ND	70	100	B6D0710	04/29/2016	04/29/16 02:20	
Chloroform	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
Chloromethane	ND	50	100	B6D0710	04/29/2016	04/29/16 02:20	
cis-1,2-Dichloroethene	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
cis-1,3-Dichloropropene	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
Cyclohexane	ND	90	100	B6D0710	04/29/2016	04/29/16 02:20	
Dibromochloromethane	ND	210	100	B6D0710	04/29/2016	04/29/16 02:20	
Dibromomethane	ND	180	100	B6D0710	04/29/2016	04/29/16 02:20	
Dichlorodifluoromethane	**300**	120	100	B6D0710	04/29/2016	04/29/16 02:20	
Dichlorotetrafluoroethane	ND	170	100	B6D0710	04/29/2016	04/29/16 02:20	
Ethanol	ND	50	100	B6D0710	04/29/2016	04/29/16 02:20	
Ethylbenzene	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
Freon-113	ND	190	100	B6D0710	04/29/2016	04/29/16 02:20	
Hexachlorobutadiene	ND	270	100	B6D0710	04/29/2016	04/29/16 02:20	
Isopropylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
m,p-Xylene	ND	430	100	B6D0710	04/29/2016	04/29/16 02:20	
Methylene chloride	ND	90	100	B6D0710	04/29/2016	04/29/16 02:20	
MTBE	ND	90	100	B6D0710	04/29/2016	04/29/16 02:20	
n-Butylbenzene	ND	140	100	B6D0710	04/29/2016	04/29/16 02:20	
n-Propylbenzene	ND	120	100	B6D0710	04/29/2016	04/29/16 02:20	
Naphthalene	ND	130	100	B6D0710	04/29/2016	04/29/16 02:20	
o-Xylene	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
p-Isopropyltoluene	ND	140	100	B6D0710	04/29/2016	04/29/16 02:20	
sec-Butylbenzene	ND	140	100	B6D0710	04/29/2016	04/29/16 02:20	
Styrene	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
tert-Butylbenzene	ND	140	100	B6D0710	04/29/2016	04/29/16 02:20	
Tetrachloroethene	**970**	170	100	B6D0710	04/29/2016	04/29/16 02:20	
Toluene	ND	90	100	B6D0710	04/29/2016	04/29/16 02:20	
trans-1,2-Dichloroethene	ND	100	100	B6D0710	04/29/2016	04/29/16 02:20	
trans-1,3-Dichloropropene	ND	110	100	B6D0710	04/29/2016	04/29/16 02:20	
Trichloroethene	ND	130	100	B6D0710	04/29/2016	04/29/16 02:20	
Trichlorofluoromethane	**2600**	140	100	B6D0710	04/29/2016	04/29/16 02:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID P-20 VP-9 @ 5' Dup

Lab ID: 1601497-11

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	90	100	B6D0710	04/29/2016	04/29/16 02:20	
Vinyl chloride		ND	60	100	B6D0710	04/29/2016	04/29/16 02:20	
Surrogate: 4-Bromofluorobenzene	*120 %*		*79.2 - 147*		B6D0710	04/29/2016	*04/29/16 02:20*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**4300**	4100	40	B6E0059	04/29/2016	04/29/16 20:58	
Surrogate: 4-Bromofluorobenzene	*107 %*		*70 - 130*		B6E0059	04/29/2016	*04/29/16 20:58*	

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Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
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QUALITY CONTROL SECTION

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0656 - No_Prep_AIR										
Blank (B6D0656-BLK1)					Prepared: 4/26/2016 Analyzed: 4/26/2016					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0656 - No_Prep_AIR (continued)										
Blank (B6D0656-BLK1) - Continued					Prepared: 4/26/2016 Analyzed: 4/26/2016					
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*18.47*			*17.8935*		*103*	*79.2 - 147*			
LCS (B6D0656-BS1)					Prepared: 4/26/2016 Analyzed: 4/26/2016					
1,1,1,2-Tetrachloroethane	13.524	2	0.57	13.7299		98.5	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0656 - No_Prep_AIR (continued)										
LCS (B6D0656-BS1) - Continued					Prepared: 4/26/2016 Analyzed: 4/26/2016					
1,1,1-Trichloroethane	9.603	1	0.58	10.9123		88.0	70 - 130			
1,1,2,2-Tetrachloroethane	13.318	2	0.77	13.7299		97.0	70 - 130			
1,1,2-Trichloroethane	8.402	1	0.45	10.9123		77.0	70 - 130			
1,1-Dichloroethane	7.326	1	0.37	8.09480		90.5	70 - 130			
1,1-Dichloroethene	7.097	0.99	0.34	7.92990		89.5	70 - 130			
1,1-Dichloropropene	8.986	1	0.37	9.07722		99.0	70 - 130			
1,2,3-Trichloropropane	11.276	2	0.58	12.0597		93.5	70 - 130			
1,2,4-Trichlorobenzene	15.213	2	0.73	14.8422		102	70 - 130			
1,2,4-Trimethylbenzene	9.193	1	0.54	9.83166		93.5	70 - 130			
1,2-Dibromo-3-chloropropane	17.689	2	1	19.3319		91.5	70 - 130			
1,2-Dibromoethane	11.756	2	0.73	15.3670		76.5	70 - 130			
1,2-Dichlorobenzene	11.063	2	0.54	12.0246		92.0	70 - 130			
1,2-Dichloroethane	6.435	1	0.34	8.09480		79.5	70 - 130			
1,2-Dichloropropane	7.301	1	0.41	9.24213		79.0	70 - 130			
1,3,5-Trimethylbenzene	9.340	1	0.51	9.83166		95.0	70 - 130			
1,3-Butadiene	3.562	0.55	0.39	4.42454		80.5	70 - 130			
1,3-Dichlorobenzene	11.063	2	0.56	12.0246		92.0	70 - 130			
1,4-Dichlorobenzene	10.942	2	0.51	12.0246		91.0	70 - 130			
1,4-Dioxane	6.090	0.90	0.65	7.20695		84.5	70 - 130			
2,2,4-Trimethylpentane	7.896	1	0.35	9.34388		84.5	70 - 130			
2-Butanone	5.367	0.74	0.24	5.89824		91.0	70 - 130			
2-Chloroethyl vinyl ether	7.583	1	0.22	8.71583		87.0	70 - 130			
2-Chlorotoluene	10.406	1	0.50	10.3544		100	70 - 130			
2-Hexanone	7.333	1	0.43	8.19296		89.5	70 - 130			
2-Propanol	4.153	0.61	0.26	4.91534		84.5	70 - 130			
4-Chlorotoluene	9.837	1	0.47	10.3544		95.0	70 - 130			
4-Ethyl Toluene	9.586	1	0.47	9.83166		97.5	70 - 130			
4-Methyl-2-pentanone	6.677	1	0.30	8.19296		81.5	70 - 130			
Acetone	3.729	0.59	0.26	4.75084		78.5	70 - 130			
Acetonitrile	2.686	0.42	0.14	3.35804		80.0	70 - 130			
Acrolein	4.976	0.57	0.22	4.58593		108	70 - 130			
Acrylonitrile	4.037	0.54	0.18	4.34053		93.0	70 - 130			
Benzene	5.367	0.80	0.28	6.38953		84.0	70 - 130			
Benzyl chloride	9.164	1	0.37	10.3544		88.5	70 - 130			
Bromobenzene	12.458	2	0.59	12.8432		97.0	70 - 130			
Bromodichloromethane	10.654	2	0.70	13.4011		79.5	70 - 130			
Bromoform	19.536	3	0.90	20.6733		94.5	70 - 130			
Bromomethane	6.485	0.97	0.46	7.76597		83.5	70 - 130			
Carbon disulfide	5.356	0.78	0.31	6.22847		86.0	70 - 130			
Carbon tetrachloride	10.506	2	0.43	12.5826		83.5	70 - 130			
Chlorobenzene	8.839	1	0.41	9.20712		96.0	70 - 130			
Chloroethane	4.090	0.66	0.28	5.27722		77.5	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0656 - No_Prep_AIR (continued)										
LCS (B6D0656-BS1) - Continued					Prepared: 4/26/2016 Analyzed: 4/26/2016					
Chloroform	8.593	1	0.50	9.76499		88.0	70 - 130			
Chloromethane	3.345	0.52	0.22	4.12982		81.0	70 - 130			
cis-1,2-Dichloroethene	6.978	0.99	0.28	7.92990		88.0	70 - 130			
cis-1,3-Dichloropropene	7.307	1	0.33	9.07724		80.5	70 - 130			
Cyclohexane	6.127	0.86	0.25	6.88425		89.0	70 - 130			
Dibromochloromethane	14.482	2	0.83	17.0371		85.0	70 - 130			
Dibromomethane	12.940	2	0.55	14.2196		91.0	70 - 130			
Dichlorodifluoromethane	9.940	1	0.56	9.89063		100	70 - 130			
Dichlorotetrafluoroethane	14.051	2	0.76	13.9812		100	70 - 130			
Ethanol	3.203	0.47	0.20	3.76834		85.0	70 - 130			
Ethylbenzene	8.380	1	0.35	8.68425		96.5	70 - 130			
Freon-113	13.258	2	0.58	15.3272		86.5	70 - 130			
Hexachlorobutadiene	22.077	3	1	21.3300		104	70 - 130			
Isopropylbenzene	9.635	1	0.52	9.83166		98.0	70 - 130			
m,p-Xylene	32.479	4	1	34.7370		93.5	70 - 130			
Methylene chloride	6.670	0.87	0.31	6.94740		96.0	70 - 130			
MTBE	6.958	0.90	0.33	7.21047		96.5	70 - 130			
n-Butylbenzene	10.210	1	0.42	10.9790		93.0	70 - 130			
n-Propylbenzene	9.389	1	0.41	9.83166		95.5	70 - 130			
Naphthalene	8.754	1	0.36	10.4843		83.5	70 - 130			
o-Xylene	8.597	1	0.40	8.68425		99.0	70 - 130			
p-Isopropyltoluene	10.485	1	0.51	10.9790		95.5	70 - 130			
sec-Butylbenzene	10.430	1	0.56	10.9790		95.0	70 - 130			
Styrene	7.327	1	0.44	8.51934		86.0	70 - 130			
tert-Butylbenzene	10.485	1	0.62	10.9790		95.5	70 - 130			
Tetrachloroethene	12.751	2	0.47	13.5650		94.0	70 - 130			
Toluene	5.690	0.94	0.28	7.53688		75.5	70 - 130			
trans-1,2-Dichloroethene	7.137	0.99	0.34	7.92990		90.0	70 - 130			
trans-1,3-Dichloropropene	6.717	1	0.34	9.07722		74.0	70 - 130			
Trichloroethene	8.705	1	0.47	10.7474		81.0	70 - 130			
Trichlorofluoromethane	9.270	1	0.53	11.2366		82.5	70 - 130			
Vinyl acetate	5.422	0.88	0.38	7.04204		77.0	70 - 130			
Vinyl chloride	4.397	0.64	0.21	5.11231		86.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	*19.90*			*17.8935*		*111*	*79.2 - 147*			
LCS Dup (B6D0656-BSD1)					Prepared: 4/26/2016 Analyzed: 4/26/2016					
1,1,1,2-Tetrachloroethane	13.387	2	0.57	13.7299		97.5	70 - 130	1.02	20	
1,1,1-Trichloroethane	9.657	1	0.58	10.9123		88.5	70 - 130	0.567	20	
1,1,2,2-Tetrachloroethane	12.426	2	0.77	13.7299		90.5	70 - 130	6.93	20	
1,1,2-Trichloroethane	8.566	1	0.45	10.9123		78.5	70 - 130	1.93	20	
1,1-Dichloroethane	7.164	1	0.37	8.09480		88.5	70 - 130	2.23	20	

Certificate of Analysis

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Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0656 - No_Prep_AIR (continued)										
LCS Dup (B6D0656-BSD1) - Continued					Prepared: 4/26/2016 Analyzed: 4/26/2016					
1,1-Dichloroethene	7.097	0.99	0.34	7.92990		89.5	70 - 130	0.00	20	
1,1-Dichloropropene	8.805	1	0.37	9.07722		97.0	70 - 130	2.04	20	
1,2,3-Trichloropropane	11.095	2	0.58	12.0597		92.0	70 - 130	1.62	20	
1,2,4-Trichlorobenzene	15.213	2	0.73	14.8422		102	70 - 130	0.00	20	
1,2,4-Trimethylbenzene	9.193	1	0.54	9.83166		93.5	70 - 130	0.00	20	
1,2-Dibromo-3-chloropropane	18.172	2	1	19.3319		94.0	70 - 130	2.70	20	
1,2-Dibromoethane	12.217	2	0.73	15.3670		79.5	70 - 130	3.85	20	
1,2-Dichlorobenzene	11.063	2	0.54	12.0246		92.0	70 - 130	0.00	20	
1,2-Dichloroethane	6.516	1	0.34	8.09480		80.5	70 - 130	1.25	20	
1,2-Dichloropropane	7.948	1	0.41	9.24213		86.0	70 - 130	8.48	20	
1,3,5-Trimethylbenzene	9.143	1	0.51	9.83166		93.0	70 - 130	2.13	20	
1,3-Butadiene	3.982	0.55	0.39	4.42454		90.0	70 - 130	11.1	20	
1,3-Dichlorobenzene	10.882	2	0.56	12.0246		90.5	70 - 130	1.64	20	
1,4-Dichlorobenzene	11.303	2	0.51	12.0246		94.0	70 - 130	3.24	20	
1,4-Dioxane	6.919	0.90	0.65	7.20695		96.0	70 - 130	12.7	20	
2,2,4-Trimethylpentane	7.802	1	0.35	9.34388		83.5	70 - 130	1.19	20	
2-Butanone	5.367	0.74	0.24	5.89824		91.0	70 - 130	0.00	20	
2-Chloroethyl vinyl ether	7.408	1	0.22	8.71583		85.0	70 - 130	2.33	20	
2-Chlorotoluene	9.785	1	0.50	10.3544		94.5	70 - 130	6.15	20	
2-Hexanone	6.841	1	0.43	8.19296		83.5	70 - 130	6.94	20	
2-Propanol	4.301	0.61	0.26	4.91534		87.5	70 - 130	3.49	20	
4-Chlorotoluene	9.733	1	0.47	10.3544		94.0	70 - 130	1.06	20	
4-Ethyl Toluene	9.340	1	0.47	9.83166		95.0	70 - 130	2.60	20	
4-Methyl-2-pentanone	6.513	1	0.30	8.19296		79.5	70 - 130	2.48	20	
Acetone	4.014	0.59	0.26	4.75084		84.5	70 - 130	7.36	20	
Acetonitrile	2.737	0.42	0.14	3.35804		81.5	70 - 130	1.86	20	
Acrolein	4.494	0.57	0.22	4.58593		98.0	70 - 130	10.2	20	
Acrylonitrile	4.189	0.54	0.18	4.34053		96.5	70 - 130	3.69	20	
Benzene	5.399	0.80	0.28	6.38953		84.5	70 - 130	0.593	20	
Benzyl chloride	9.371	1	0.37	10.3544		90.5	70 - 130	2.23	20	
Bromobenzene	12.137	2	0.59	12.8432		94.5	70 - 130	2.61	20	
Bromodichloromethane	10.587	2	0.70	13.4011		79.0	70 - 130	0.631	20	
Bromoform	18.916	3	0.90	20.6733		91.5	70 - 130	3.23	20	
Bromomethane	6.756	0.97	0.46	7.76597		87.0	70 - 130	4.11	20	
Carbon disulfide	5.481	0.78	0.31	6.22847		88.0	70 - 130	2.30	20	
Carbon tetrachloride	10.444	2	0.43	12.5826		83.0	70 - 130	0.601	20	
Chlorobenzene	8.056	1	0.41	9.20712		87.5	70 - 130	9.26	20	
Chloroethane	4.512	0.66	0.28	5.27722		85.5	70 - 130	9.82	20	
Chloroform	8.349	1	0.50	9.76499		85.5	70 - 130	2.88	20	
Chloromethane	4.130	0.52	0.22	4.12982		100	70 - 130	21.0	20	R
cis-1,2-Dichloroethene	7.216	0.99	0.28	7.92990		91.0	70 - 130	3.35	20	
cis-1,3-Dichloropropene	7.262	1	0.33	9.07724		80.0	70 - 130	0.623	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0656 - No_Prep_AIR (continued)										
LCS Dup (B6D0656-BSD1) - Continued						Prepared: 4/26/2016 Analyzed: 4/26/2016				
Cyclohexane	5.955	0.86	0.25	6.88425		86.5	70 - 130	2.85	20	
Dibromochloromethane	14.396	2	0.83	17.0371		84.5	70 - 130	0.590	20	
Dibromomethane	12.513	2	0.55	14.2196		88.0	70 - 130	3.35	20	
Dichlorodifluoromethane	10.632	1	0.56	9.89063		108	70 - 130	6.73	20	
Dichlorotetrafluoroethane	15.449	2	0.76	13.9812		110	70 - 130	9.48	20	
Ethanol	3.260	0.47	0.20	3.76834		86.5	70 - 130	1.75	20	
Ethylbenzene	8.163	1	0.35	8.68425		94.0	70 - 130	2.62	20	
Freon-113	13.258	2	0.58	15.3272		86.5	70 - 130	0.00	20	
Hexachlorobutadiene	21.223	3	1	21.3300		99.5	70 - 130	3.94	20	
Isopropylbenzene	9.242	1	0.52	9.83166		94.0	70 - 130	4.17	20	
m,p-Xylene	31.176	4	1	34.7370		89.8	70 - 130	4.09	20	
Methylene chloride	6.148	0.87	0.31	6.94740		88.5	70 - 130	8.13	20	
MTBE	6.778	0.90	0.33	7.21047		94.0	70 - 130	2.62	20	
n-Butylbenzene	10.046	1	0.42	10.9790		91.5	70 - 130	1.63	20	
n-Propylbenzene	9.094	1	0.41	9.83166		92.5	70 - 130	3.19	20	
Naphthalene	8.754	1	0.36	10.4843		83.5	70 - 130	0.00	20	
o-Xylene	8.380	1	0.40	8.68425		96.5	70 - 130	2.56	20	
p-Isopropyltoluene	10.210	1	0.51	10.9790		93.0	70 - 130	2.65	20	
sec-Butylbenzene	10.320	1	0.56	10.9790		94.0	70 - 130	1.06	20	
Styrene	8.008	1	0.44	8.51934		94.0	70 - 130	8.89	20	
tert-Butylbenzene	10.485	1	0.62	10.9790		95.5	70 - 130	0.00	20	
Tetrachloroethene	12.073	2	0.47	13.5650		89.0	70 - 130	5.46	20	
Toluene	6.143	0.94	0.28	7.53688		81.5	70 - 130	7.64	20	
trans-1,2-Dichloroethene	7.216	0.99	0.34	7.92990		91.0	70 - 130	1.10	20	
trans-1,3-Dichloropropene	7.262	1	0.34	9.07722		80.0	70 - 130	7.79	20	
Trichloroethene	8.759	1	0.47	10.7474		81.5	70 - 130	0.615	20	
Trichlorofluoromethane	9.326	1	0.53	11.2366		83.0	70 - 130	0.604	20	
Vinyl acetate	5.422	0.88	0.38	7.04204		77.0	70 - 130	0.00	20	
Vinyl chloride	4.908	0.64	0.21	5.11231		96.0	70 - 130	11.0	20	
Surrogate: 4-Bromofluorobenzene	*19.61*			*17.8935*		*110*	*79.2 - 147*			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0710 - No_Prep_AIR										
LCS (B6D0710-BS1)					Prepared: 4/28/2016 Analyzed: 4/28/2016					
1,1,1,2-Tetrachloroethane	13.593	2	0.57	13.7299		99.0	70 - 130			
1,1,1-Trichloroethane	11.403	1	0.58	10.9123		104	70 - 130			
1,1,2,2-Tetrachloroethane	15.858	2	0.77	13.7299		116	70 - 130			
1,1,2-Trichloroethane	10.749	1	0.45	10.9123		98.5	70 - 130			
1,1-Dichloroethane	8.419	1	0.37	8.09480		104	70 - 130			
1,1-Dichloroethene	7.811	0.99	0.34	7.92990		98.5	70 - 130			
1,1-Dichloropropene	8.941	1	0.37	9.07722		98.5	70 - 130			
1,2,3-Trichloropropane	11.155	2	0.58	12.0597		92.5	70 - 130			
1,2,4-Trichlorobenzene	14.842	2	0.73	14.8422		100	70 - 130			
1,2,4-Trimethylbenzene	10.913	1	0.54	9.83166		111	70 - 130			
1,2-Dibromo-3-chloropropane	16.335	2	1	19.3319		84.5	70 - 130			
1,2-Dibromoethane	13.600	2	0.73	15.3670		88.5	70 - 130			
1,2-Dichlorobenzene	13.107	2	0.54	12.0246		109	70 - 130			
1,2-Dichloroethane	7.973	1	0.34	8.09480		98.5	70 - 130			
1,2-Dichloropropane	9.473	1	0.41	9.24213		102	70 - 130			
1,3,5-Trimethylbenzene	11.061	1	0.51	9.83166		112	70 - 130			
1,3-Butadiene	4.203	0.55	0.39	4.42454		95.0	70 - 130			
1,3-Dichlorobenzene	13.107	2	0.56	12.0246		109	70 - 130			
1,4-Dichlorobenzene	13.047	2	0.51	12.0246		109	70 - 130			
1,4-Dioxane	8.180	0.90	0.65	7.20695		114	70 - 130			
2,2,4-Trimethylpentane	9.250	1	0.35	9.34388		99.0	70 - 130			
2-Butanone	5.957	0.74	0.24	5.89824		101	70 - 130			
2-Chloroethyl vinyl ether	7.670	1	0.22	8.71583		88.0	70 - 130			
2-Chlorotoluene	12.218	1	0.50	10.3544		118	70 - 130			
2-Hexanone	7.742	1	0.43	8.19296		94.5	70 - 130			
2-Propanol	4.940	0.61	0.26	4.91534		100	70 - 130			
4-Chlorotoluene	9.733	1	0.47	10.3544		94.0	70 - 130			
4-Ethyl Toluene	11.405	1	0.47	9.83166		116	70 - 130			
4-Methyl-2-pentanone	8.439	1	0.30	8.19296		103	70 - 130			
Acetone	4.371	0.59	0.26	4.75084		92.0	70 - 130			
Acetonitrile	3.106	0.42	0.14	3.35804		92.5	70 - 130			
Acrolein	5.090	0.57	0.22	4.58593		111	70 - 130			
Acrylonitrile	4.492	0.54	0.18	4.34053		104	70 - 130			
Benzene	6.549	0.80	0.28	6.38953		102	70 - 130			
Benzyl chloride	10.976	1	0.37	10.3544		106	70 - 130			
Bromobenzene	12.265	2	0.59	12.8432		95.5	70 - 130			
Bromodichloromethane	13.334	2	0.70	13.4011		99.5	70 - 130			
Bromoform	23.051	3	0.90	20.6733		112	70 - 130			
Bromomethane	7.222	0.97	0.46	7.76597		93.0	70 - 130			
Carbon disulfide	6.073	0.78	0.31	6.22847		97.5	70 - 130			
Carbon tetrachloride	12.708	2	0.43	12.5826		101	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0710 - No_Prep_AIR (continued)										
LCS (B6D0710-BS1) - Continued					Prepared: 4/28/2016 Analyzed: 4/28/2016					
Chlorobenzene	10.358	1	0.41	9.20712		113	70 - 130			
Chloroethane	5.304	0.66	0.28	5.27722		100	70 - 130			
Chloroform	9.716	1	0.50	9.76499		99.5	70 - 130			
Chloromethane	4.336	0.52	0.22	4.12982		105	70 - 130			
cis-1,2-Dichloroethene	8.049	0.99	0.28	7.92990		102	70 - 130			
cis-1,3-Dichloropropene	8.487	1	0.33	9.07724		93.5	70 - 130			
Cyclohexane	6.919	0.86	0.25	6.88425		100	70 - 130			
Dibromochloromethane	19.252	2	0.83	17.0371		113	70 - 130			
Dibromomethane	12.229	2	0.55	14.2196		86.0	70 - 130			
Dichlorodifluoromethane	11.127	1	0.56	9.89063		112	70 - 130			
Dichlorotetrafluoroethane	16.008	2	0.76	13.9812		114	70 - 130			
Ethanol	3.561	0.47	0.20	3.76834		94.5	70 - 130			
Ethylbenzene	10.421	1	0.35	8.68425		120	70 - 130			
Freon-113	15.404	2	0.58	15.3272		100	70 - 130			
Hexachlorobutadiene	21.117	3	1	21.3300		99.0	70 - 130			
Isopropylbenzene	11.159	1	0.52	9.83166		114	70 - 130			
m,p-Xylene	39.427	4	1	34.7370		114	70 - 130			
Methylene chloride	6.774	0.87	0.31	6.94740		97.5	70 - 130			
MTBE	7.535	0.90	0.33	7.21047		104	70 - 130			
n-Butylbenzene	12.406	1	0.42	10.9790		113	70 - 130			
n-Propylbenzene	10.618	1	0.41	9.83166		108	70 - 130			
Naphthalene	11.795	1	0.36	10.4843		112	70 - 130			
o-Xylene	10.030	1	0.40	8.68425		116	70 - 130			
p-Isopropyltoluene	10.156	1	0.51	10.9790		92.5	70 - 130			
sec-Butylbenzene	12.516	1	0.56	10.9790		114	70 - 130			
Styrene	9.925	1	0.44	8.51934		116	70 - 130			
tert-Butylbenzene	12.351	1	0.62	10.9790		112	70 - 130			
Tetrachloroethene	15.600	2	0.47	13.5650		115	70 - 130			
Toluene	7.160	0.94	0.28	7.53688		95.0	70 - 130			
trans-1,2-Dichloroethene	7.771	0.99	0.34	7.92990		98.0	70 - 130			
trans-1,3-Dichloropropene	8.533	1	0.34	9.07722		94.0	70 - 130			
Trichloroethene	10.264	1	0.47	10.7474		95.5	70 - 130			
Trichlorofluoromethane	10.956	1	0.53	11.2366		97.5	70 - 130			
Vinyl acetate	6.549	0.88	0.38	7.04204		93.0	70 - 130			
Vinyl chloride	5.087	0.64	0.21	5.11231		99.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	*20.33*			*17.8935*		*114*	*79.2 - 147*			
LCS Dup (B6D0710-BSD1)					Prepared: 4/28/2016 Analyzed: 4/28/2016					
1,1,1,2-Tetrachloroethane	15.103	2	0.57	13.7299		110	70 - 130	10.5	20	
1,1,1-Trichloroethane	10.640	1	0.58	10.9123		97.5	70 - 130	6.93	20	
1,1,2,2-Tetrachloroethane	15.034	2	0.77	13.7299		110	70 - 130	5.33	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0710 - No_Prep_AIR (continued)										
LCS Dup (B6D0710-BSD1) - Continued					Prepared: 4/28/2016 Analyzed: 4/28/2016					
1,1,2-Trichloroethane	10.367	1	0.45	10.9123		95.0	70 - 130	3.62	20	
1,1-Dichloroethane	7.892	1	0.37	8.09480		97.5	70 - 130	6.45	20	
1,1-Dichloroethene	7.851	0.99	0.34	7.92990		99.0	70 - 130	0.506	20	
1,1-Dichloropropene	8.260	1	0.37	9.07722		91.0	70 - 130	7.92	20	
1,2,3-Trichloropropane	10.974	2	0.58	12.0597		91.0	70 - 130	1.63	20	
1,2,4-Trichlorobenzene	14.471	2	0.73	14.8422		97.5	70 - 130	2.53	20	
1,2,4-Trimethylbenzene	10.274	1	0.54	9.83166		104	70 - 130	6.03	20	
1,2-Dibromo-3-chloropropane	16.915	2	1	19.3319		87.5	70 - 130	3.49	20	
1,2-Dibromoethane	12.601	2	0.73	15.3670		82.0	70 - 130	7.62	20	
1,2-Dichlorobenzene	12.746	2	0.54	12.0246		106	70 - 130	2.79	20	
1,2-Dichloroethane	7.528	1	0.34	8.09480		93.0	70 - 130	5.74	20	
1,2-Dichloropropane	8.965	1	0.41	9.24213		97.0	70 - 130	5.51	20	
1,3,5-Trimethylbenzene	10.520	1	0.51	9.83166		107	70 - 130	5.01	20	
1,3-Butadiene	4.292	0.55	0.39	4.42454		97.0	70 - 130	2.08	20	
1,3-Dichlorobenzene	12.385	2	0.56	12.0246		103	70 - 130	5.66	20	
1,4-Dichlorobenzene	12.265	2	0.51	12.0246		102	70 - 130	6.18	20	
1,4-Dioxane	8.000	0.90	0.65	7.20695		111	70 - 130	2.23	20	
2,2,4-Trimethylpentane	8.737	1	0.35	9.34388		93.5	70 - 130	5.71	20	
2-Butanone	6.016	0.74	0.24	5.89824		102	70 - 130	0.985	20	
2-Chloroethyl vinyl ether	7.191	1	0.22	8.71583		82.5	70 - 130	6.45	20	
2-Chlorotoluene	11.493	1	0.50	10.3544		111	70 - 130	6.11	20	
2-Hexanone	7.947	1	0.43	8.19296		97.0	70 - 130	2.61	20	
2-Propanol	4.817	0.61	0.26	4.91534		98.0	70 - 130	2.52	20	
4-Chlorotoluene	9.215	1	0.47	10.3544		89.0	70 - 130	5.46	20	
4-Ethyl Toluene	10.717	1	0.47	9.83166		109	70 - 130	6.22	20	
4-Methyl-2-pentanone	7.742	1	0.30	8.19296		94.5	70 - 130	8.61	20	
Acetone	4.228	0.59	0.26	4.75084		89.0	70 - 130	3.31	20	
Acetonitrile	3.157	0.42	0.14	3.35804		94.0	70 - 130	1.61	20	
Acrolein	5.664	0.57	0.22	4.58593		124	70 - 130	10.7	20	
Acrylonitrile	4.232	0.54	0.18	4.34053		97.5	70 - 130	5.97	20	
Benzene	6.262	0.80	0.28	6.38953		98.0	70 - 130	4.49	20	
Benzyl chloride	10.458	1	0.37	10.3544		101	70 - 130	4.83	20	
Bromobenzene	11.109	2	0.59	12.8432		86.5	70 - 130	9.89	20	
Bromodichloromethane	12.664	2	0.70	13.4011		94.5	70 - 130	5.15	20	
Bromoform	21.397	3	0.90	20.6733		104	70 - 130	7.44	20	
Bromomethane	7.649	0.97	0.46	7.76597		98.5	70 - 130	5.74	20	
Carbon disulfide	5.979	0.78	0.31	6.22847		96.0	70 - 130	1.55	20	
Carbon tetrachloride	12.142	2	0.43	12.5826		96.5	70 - 130	4.56	20	
Chlorobenzene	8.563	1	0.41	9.20712		93.0	70 - 130	19.0	20	
Chloroethane	5.172	0.66	0.28	5.27722		98.0	70 - 130	2.52	20	
Chloroform	9.472	1	0.50	9.76499		97.0	70 - 130	2.54	20	
Chloromethane	4.336	0.52	0.22	4.12982		105	70 - 130	0.00	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6D0710 - No_Prep_AIR (continued)										
LCS Dup (B6D0710-BSD1) - Continued					Prepared: 4/28/2016 Analyzed: 4/28/2016					
cis-1,2-Dichloroethene	7.771	0.99	0.28	7.92990		98.0	70 - 130	3.51	20	
cis-1,3-Dichloropropene	8.533	1	0.33	9.07724		94.0	70 - 130	0.533	20	
Cyclohexane	6.712	0.86	0.25	6.88425		97.5	70 - 130	3.03	20	
Dibromochloromethane	16.867	2	0.83	17.0371		99.0	70 - 130	13.2	20	
Dibromomethane	12.584	2	0.55	14.2196		88.5	70 - 130	2.87	20	
Dichlorodifluoromethane	11.325	1	0.56	9.89063		115	70 - 130	1.76	20	
Dichlorotetrafluoroethane	16.568	2	0.76	13.9812		118	70 - 130	3.43	20	
Ethanol	3.429	0.47	0.20	3.76834		91.0	70 - 130	3.77	20	
Ethylbenzene	9.683	1	0.35	8.68425		112	70 - 130	7.34	20	
Freon-113	15.021	2	0.58	15.3272		98.0	70 - 130	2.52	20	
Hexachlorobutadiene	20.690	3	1	21.3300		97.0	70 - 130	2.04	20	
Isopropylbenzene	10.766	1	0.52	9.83166		110	70 - 130	3.59	20	
m,p-Xylene	37.342	4	1	34.7370		108	70 - 130	5.43	20	
Methylene chloride	6.392	0.87	0.31	6.94740		92.0	70 - 130	5.80	20	
MTBE	7.247	0.90	0.33	7.21047		100	70 - 130	3.90	20	
n-Butylbenzene	11.912	1	0.42	10.9790		108	70 - 130	4.06	20	
n-Propylbenzene	10.127	1	0.41	9.83166		103	70 - 130	4.74	20	
Naphthalene	11.061	1	0.36	10.4843		105	70 - 130	6.42	20	
o-Xylene	9.509	1	0.40	8.68425		110	70 - 130	5.33	20	
p-Isopropyltoluene	9.771	1	0.51	10.9790		89.0	70 - 130	3.86	20	
sec-Butylbenzene	11.802	1	0.56	10.9790		108	70 - 130	5.87	20	
Styrene	9.031	1	0.44	8.51934		106	70 - 130	9.44	20	
tert-Butylbenzene	11.967	1	0.62	10.9790		109	70 - 130	3.16	20	
Tetrachloroethene	13.701	2	0.47	13.5650		101	70 - 130	13.0	20	
Toluene	6.557	0.94	0.28	7.53688		87.0	70 - 130	8.79	20	
trans-1,2-Dichloroethene	7.890	0.99	0.34	7.92990		99.5	70 - 130	1.52	20	
trans-1,3-Dichloropropene	8.033	1	0.34	9.07722		88.5	70 - 130	6.03	20	
Trichloroethene	9.619	1	0.47	10.7474		89.5	70 - 130	6.49	20	
Trichlorofluoromethane	10.956	1	0.53	11.2366		97.5	70 - 130	0.00	20	
Vinyl acetate	6.620	0.88	0.38	7.04204		94.0	70 - 130	1.07	20	
Vinyl chloride	5.215	0.64	0.21	5.11231		102	70 - 130	2.48	20	
Surrogate: 4-Bromofluorobenzene	*19.75*			*17.8935*		*110*	*79.2 - 147*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6E0059 - No_Prep_AIR										
Blank (B6E0059-BLK1)					Prepared: 4/29/2016 Analyzed: 4/29/2016					
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*19.18*			*17.8935*		*107*	*70 - 130*			
LCS (B6E0059-BS1)					Prepared: 4/29/2016 Analyzed: 4/29/2016					
Gasoline Range Organics	687.076	100	70	817.996		84.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	*24.91*			*17.8935*		*139*	*70 - 130*			S10
LCS Dup (B6E0059-BSD1)					Prepared: 4/29/2016 Analyzed: 4/29/2016					
Gasoline Range Organics	674.888	100	70	817.996		82.5	70 - 130	1.79	20	
Surrogate: 4-Bromofluorobenzene	*25.41*			*17.8935*		*142*	*70 - 130*			S10

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6E0080 - No_Prep_AIR										
Blank (B6E0080-BLK1)					Prepared: 5/3/2016 Analyzed: 5/3/2016					
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*18.54*			*17.8935*		*104*	*70 - 130*			
LCS (B6E0080-BS1)					Prepared: 5/3/2016 Analyzed: 5/3/2016					
Gasoline Range Organics	843.763	100	70	817.996		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	*24.12*			*17.8935*		*135*	*70 - 130*			S10
LCS Dup (B6E0080-BSD1)					Prepared: 5/3/2016 Analyzed: 5/3/2016					
Gasoline Range Organics	859.836	100	70	817.996		105	70 - 130	1.89	20	
Surrogate: 4-Bromofluorobenzene	*23.12*			*17.8935*		*129*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 20 6th St. Bridge, LAC 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Notes and Definitions

S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715
Method of Transport		**Sample Conditions Upon Receipt**		
		Condition	Y / N	Condition	Y / N
☑ Client ☐ ATL		1. CHILLED N/A	☐ ☐	5. # OF SAMPLES MATCH COC	☑ ☐
☐ FedEx ☐ OnTrac		2. HEADSPACE (VOA)	☐ ☐	6. PRESERVED	☐ ☑
☐ GSO		3. CONTAINER INTACT	☑ ☐	7. COOLER TEMP, deg C:	—
☐ Other:		4. SEALED	☐ ☑		

CUSTOMER

Company: Hushmand & Assoc | Address: 250 Goddard St. | Tel: 949-777-1266
City: Irvine | State: CA | Zip: 92618 | Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Naresh Bellana Email:	Attn: Sac. Email:
Company: Hushmand & Assoc.	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name: Parcel 20 6th St. Bridge
Project No.: LAC 15-003
Sampler: Don Terres
Quote No: E15G161
PO #:
Special Instructions/Comments: 2propanol used for Leak Testing

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO) TPH-G	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	Vapor	TAT	Container #	Container Type	Container Material	Preservative	REMARKS
1	160/497 -1	P-20 VP-1 @ 5'	4/26	11:59		X						X	X		1	T	3	N/A	
2	-2	P-20 VP-2 @ 5'		12:02		X						X	X		1	T			
3	-3	P-20 VP-3 @ 5'		12:05		X						X	X		1	T			
4	-4	P-20 VP-4 @ 5'		12:11		X						X	X		1	T			
5	-5	P-20 VP-5 @ 3'		12:16		X						X	X		1	T			
6	-6	P-20 VP-6 @ 5'		12:20		X						X	X		1	T			
7	-7	P-20 VP-7 @ 3'		12:27		X						X	X		1	T			
8	-8	P-20 VP-8 @ 5'		12:31		X						X	X		1	T			
9	-9	P-00 VP-9 @ 5'		12:36		X						X	X		1	T			
10																			

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

Container Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister
Material: 1=Glass; 2=Plastic; 3=Metal
Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

SUBCONTRACT

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name
Don — Signature

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	4/26	2:00	Fpalmer	4/26/15	1400
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand
Address: 250 Goddard St
City: Irvine State: CA Zip: 92618
Tel:
Fax:

SEND REPORT TO:
Attn: Naresh Bellana. Email:
Company:
Address:
City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	Vapor	TAT	Container: #	Type	Material	Preservative	REMARKS
1	160497-12	P-20 VP-4 @ 5' Dup.	4/26	12:~~45~~		X						X						X		1	7			N/A
2	1 -11	P-20 VP-9 @ 5' Dup	4/26	12:45		X						X						X		1	7			↓
3						X																		
4																								
5																								
6																								
7																								
8																								
9																								
10																								

QA/QC
☐ Routine
☐ Caltrans
☐ Legal
☐ RWQCB
☐ Level IV

Container: Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister. Material: 1=Glass; 2=Plastic; 3=Metal.
Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

TERMS & CONDITIONS

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   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name
Signature

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	4/26	2:00	Brown	4/26/12	14:00
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

Fernando Diwa

From: Naresh Bellana [naresh@haieng.com]
Sent: Tuesday, April 26, 2016 5:05 PM
To: Fernando Diwa
Cc: Carmen Aguila; Rachelle Arada
Subject: RE: Parcel 20 6th St., Bridge, LAC 15-003

Fernando,

It should be P-20. It must have been a typo by my geologist. Please correct to P-20 for your records.

Thanking you,

Sincerely,

Naresh Bellana, MS, PE
Senior Staff Engineer

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. *(949) 777-1266*
d. *(949) 777-1275*
f. *(949) 777-1276*

From: Fernando Diwa [mailto:fernando@atlglobal.com]
Sent: Tuesday, April 26, 2016 5:04 PM
To: Naresh Bellana
Cc: Carmen Aguila; Rachelle Arada
Subject: Parcel 20 6th St., Bridge, LAC 15-003

Hi Naresh,

The air sample collected @ 12:36 listed on the attached coc as P-00 VP-9 @ 5', but the sample we received labeled as P-20 VP-9 @ 5'

Please advise.

Regards,

Fernando Diwa

Advanced Technology Laboratories
www.atlglobal.com
Tel: (562) 989-4045 ext. 236
Fax: (562) 989-8807

March 26, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1604252
Client Reference : 6th St. Bridge, 15-003

Enclosed are the results for sample(s) received on November 23, 2016 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VMW-1	1604252-01	Vapor	11/23/16 7:34	11/23/16 9:12
VMW-1 Dup	1604252-02	Vapor	11/23/16 7:45	11/23/16 9:12
VMW-2	1604252-03	Vapor	11/23/16 7:54	11/23/16 9:12
VMW-3	1604252-04	Vapor	11/23/16 8:06	11/23/16 9:12
VMW-4	1604252-05	Vapor	11/23/16 7:07	11/23/16 9:12

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1

Lab ID: 1604252-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:20	
1,1,1-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
1,1,2,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:20	
1,1,2-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
1,1-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
1,1-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
1,1-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2,3-Trichloropropane	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2,4-Trichlorobenzene	ND	9	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2,4-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2-Dibromo-3-chloropropane	ND	10	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2-Dibromoethane	ND	10	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
1,2-Dichloropropane	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
1,3,5-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
1,3-Butadiene	ND	3	5	B6L0062	11/30/2016	11/30/16 21:20	
1,3-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	
1,4-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	
1,4-Dioxane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
2,2,4-Trimethylpentane	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
2-Butanone	ND	4	5	B6L0062	11/30/2016	11/30/16 21:20	
2-Chloroethyl vinyl ether	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
2-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
2-Hexanone	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
2-Propanol	**10**	3	5	B6L0062	11/30/2016	11/30/16 21:20	
4-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
4-Ethyl Toluene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
4-Methyl-2-pentanone	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
Acetone	**70**	3	5	B6L0062	11/30/2016	11/30/16 21:20	
Acetonitrile	ND	2	5	B6L0062	11/30/2016	11/30/16 21:20	
Acrolein	ND	3	5	B6L0062	11/30/2016	11/30/16 21:20	
Acrylonitrile	ND	3	5	B6L0062	11/30/2016	11/30/16 21:20	
Benzene	ND	4	5	B6L0062	11/30/2016	11/30/16 21:20	
Benzyl chloride	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Bromobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	
Bromodichloromethane	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1

Lab ID: 1604252-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	10	5	B6L0062	11/30/2016	11/30/16 21:20	
Bromomethane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
Carbon disulfide	ND	4	5	B6L0062	11/30/2016	11/30/16 21:20	
Carbon tetrachloride	ND	8	5	B6L0062	11/30/2016	11/30/16 21:20	
Chlorobenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Chloroethane	ND	3	5	B6L0062	11/30/2016	11/30/16 21:20	
Chloroform	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Chloromethane	ND	3	5	B6L0062	11/30/2016	11/30/16 21:20	
cis-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
cis-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Cyclohexane	ND	4	5	B6L0062	11/30/2016	11/30/16 21:20	
Dibromochloromethane	ND	10	5	B6L0062	11/30/2016	11/30/16 21:20	
Dibromomethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:20	
Dichlorodifluoromethane	**9**	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Dichlorotetrafluoroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:20	
Ethanol	**3**	2	5	B6L0062	11/30/2016	11/30/16 21:20	
Ethylbenzene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
Freon-113	ND	10	5	B6L0062	11/30/2016	11/30/16 21:20	
Hexachlorobutadiene	ND	10	5	B6L0062	11/30/2016	11/30/16 21:20	
Isopropylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
m,p-Xylene	**20**	20	5	B6L0062	11/30/2016	11/30/16 21:20	
Methylene chloride	ND	4	5	B6L0062	11/30/2016	11/30/16 21:20	
MTBE	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
n-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
n-Propylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Naphthalene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
o-Xylene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
p-Isopropyltoluene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
sec-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
Styrene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
tert-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
Tetrachloroethene	**10**	8	5	B6L0062	11/30/2016	11/30/16 21:20	
Toluene	**50**	5	5	B6L0062	11/30/2016	11/30/16 21:20	
trans-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:20	
trans-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:20	
Trichloroethene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:20	
Trichlorofluoromethane	**20**	7	5	B6L0062	11/30/2016	11/30/16 21:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1

Lab ID: 1604252-01

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	4	5	B6L0062	11/30/2016	11/30/16 21:20	
Vinyl chloride		ND	3	5	B6L0062	11/30/2016	11/30/16 21:20	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B6L0062	11/30/2016	*11/30/16 21:20*	

Gasoline Range Organics in Air by TO-3

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**300**	200	2	B6L0163	12/02/2016	12/02/16 11:44	
Surrogate: 4-Bromofluorobenzene	*102 %*		*70 - 130*		B6L0163	12/02/2016	*12/02/16 11:44*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1 Dup

Lab ID: 1604252-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:59	
1,1,1-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
1,1,2,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:59	
1,1,2-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
1,1-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
1,1-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
1,1-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2,3-Trichloropropane	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2,4-Trichlorobenzene	ND	9	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2,4-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2-Dibromo-3-chloropropane	ND	10	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2-Dibromoethane	ND	10	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
1,2-Dichloropropane	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
1,3,5-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
1,3-Butadiene	ND	3	5	B6L0062	11/30/2016	11/30/16 21:59	
1,3-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	
1,4-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	
1,4-Dioxane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
2,2,4-Trimethylpentane	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
2-Butanone	ND	4	5	B6L0062	11/30/2016	11/30/16 21:59	
2-Chloroethyl vinyl ether	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
2-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
2-Hexanone	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
2-Propanol	**10**	3	5	B6L0062	11/30/2016	11/30/16 21:59	
4-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
4-Ethyl Toluene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
4-Methyl-2-pentanone	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
Acetone	**60**	3	5	B6L0062	11/30/2016	11/30/16 21:59	
Acetonitrile	ND	2	5	B6L0062	11/30/2016	11/30/16 21:59	
Acrolein	ND	3	5	B6L0062	11/30/2016	11/30/16 21:59	
Acrylonitrile	ND	3	5	B6L0062	11/30/2016	11/30/16 21:59	
Benzene	ND	4	5	B6L0062	11/30/2016	11/30/16 21:59	
Benzyl chloride	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Bromobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	
Bromodichloromethane	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1 Dup

Lab ID: 1604252-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	10	5	B6L0062	11/30/2016	11/30/16 21:59	
Bromomethane	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
Carbon disulfide	ND	4	5	B6L0062	11/30/2016	11/30/16 21:59	
Carbon tetrachloride	ND	8	5	B6L0062	11/30/2016	11/30/16 21:59	
Chlorobenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Chloroethane	ND	3	5	B6L0062	11/30/2016	11/30/16 21:59	
Chloroform	**110**	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Chloromethane	ND	3	5	B6L0062	11/30/2016	11/30/16 21:59	
cis-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
cis-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Cyclohexane	ND	4	5	B6L0062	11/30/2016	11/30/16 21:59	
Dibromochloromethane	ND	10	5	B6L0062	11/30/2016	11/30/16 21:59	
Dibromomethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:59	
Dichlorodifluoromethane	**9**	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Dichlorotetrafluoroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 21:59	
Ethanol	**4**	2	5	B6L0062	11/30/2016	11/30/16 21:59	
Ethylbenzene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
Freon-113	ND	10	5	B6L0062	11/30/2016	11/30/16 21:59	
Hexachlorobutadiene	ND	10	5	B6L0062	11/30/2016	11/30/16 21:59	
Isopropylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
m,p-Xylene	ND	20	5	B6L0062	11/30/2016	11/30/16 21:59	
Methylene chloride	ND	4	5	B6L0062	11/30/2016	11/30/16 21:59	
MTBE	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
n-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
n-Propylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Naphthalene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
o-Xylene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
p-Isopropyltoluene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
sec-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
Styrene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
tert-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
Tetrachloroethene	**490**	8	5	B6L0062	11/30/2016	11/30/16 21:59	
Toluene	**40**	5	5	B6L0062	11/30/2016	11/30/16 21:59	
trans-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 21:59	
trans-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 21:59	
Trichloroethene	ND	7	5	B6L0062	11/30/2016	11/30/16 21:59	
Trichlorofluoromethane	**20**	7	5	B6L0062	11/30/2016	11/30/16 21:59	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1 Dup

Lab ID: 1604252-02

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: LT

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate	ND	4	5	B6L0062	11/30/2016	11/30/16 21:59	
Vinyl chloride	ND	3	5	B6L0062	11/30/2016	11/30/16 21:59	
Surrogate: 4-Bromofluorobenzene *106 %*		*79.2 - 147*		B6L0062	11/30/2016	*11/30/16 21:59*	

Gasoline Range Organics in Air by TO-3

Analyst: LT

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	**780**	200	2	B6L0163	12/02/2016	12/02/16 12:27	
Surrogate: 4-Bromofluorobenzene *103 %*		*70 - 130*		B6L0163	12/02/2016	*12/02/16 12:27*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-2

Lab ID: 1604252-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 22:38	
1,1,1-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
1,1,2,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 22:38	
1,1,2-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
1,1-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
1,1-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
1,1-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2,3-Trichloropropane	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2,4-Trichlorobenzene	ND	9	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2,4-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2-Dibromo-3-chloropropane	ND	10	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2-Dibromoethane	ND	10	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
1,2-Dichloropropane	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
1,3,5-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
1,3-Butadiene	ND	3	5	B6L0062	11/30/2016	11/30/16 22:38	
1,3-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
1,4-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
1,4-Dioxane	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
2,2,4-Trimethylpentane	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
2-Butanone	ND	4	5	B6L0062	11/30/2016	11/30/16 22:38	
2-Chloroethyl vinyl ether	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
2-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
2-Hexanone	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
2-Propanol	**6**	3	5	B6L0062	11/30/2016	11/30/16 22:38	
4-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
4-Ethyl Toluene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
4-Methyl-2-pentanone	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
Acetone	**50**	3	5	B6L0062	11/30/2016	11/30/16 22:38	
Acetonitrile	ND	2	5	B6L0062	11/30/2016	11/30/16 22:38	
Acrolein	ND	3	5	B6L0062	11/30/2016	11/30/16 22:38	
Acrylonitrile	ND	3	5	B6L0062	11/30/2016	11/30/16 22:38	
Benzene	ND	4	5	B6L0062	11/30/2016	11/30/16 22:38	
Benzyl chloride	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Bromobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
Bromodichloromethane	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-2

Lab ID: 1604252-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	10	5	B6L0062	11/30/2016	11/30/16 22:38	
Bromomethane	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
Carbon disulfide	ND	4	5	B6L0062	11/30/2016	11/30/16 22:38	
Carbon tetrachloride	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
Chlorobenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Chloroethane	ND	3	5	B6L0062	11/30/2016	11/30/16 22:38	
Chloroform	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Chloromethane	ND	3	5	B6L0062	11/30/2016	11/30/16 22:38	
cis-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
cis-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Cyclohexane	ND	4	5	B6L0062	11/30/2016	11/30/16 22:38	
Dibromochloromethane	ND	10	5	B6L0062	11/30/2016	11/30/16 22:38	
Dibromomethane	ND	9	5	B6L0062	11/30/2016	11/30/16 22:38	
Dichlorodifluoromethane	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Dichlorotetrafluoroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 22:38	
Ethanol	ND	2	5	B6L0062	11/30/2016	11/30/16 22:38	
Ethylbenzene	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
Freon-113	ND	10	5	B6L0062	11/30/2016	11/30/16 22:38	
Hexachlorobutadiene	ND	10	5	B6L0062	11/30/2016	11/30/16 22:38	
Isopropylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
m,p-Xylene	ND	20	5	B6L0062	11/30/2016	11/30/16 22:38	
Methylene chloride	ND	4	5	B6L0062	11/30/2016	11/30/16 22:38	
MTBE	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
n-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
n-Propylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Naphthalene	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
o-Xylene	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
p-Isopropyltoluene	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
sec-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
Styrene	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
tert-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
Tetrachloroethene	ND	8	5	B6L0062	11/30/2016	11/30/16 22:38	
Toluene	**40**	5	5	B6L0062	11/30/2016	11/30/16 22:38	
trans-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 22:38	
trans-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 22:38	
Trichloroethene	ND	7	5	B6L0062	11/30/2016	11/30/16 22:38	
Trichlorofluoromethane	**10**	7	5	B6L0062	11/30/2016	11/30/16 22:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-2

Lab ID: 1604252-03

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	4	5	B6L0062	11/30/2016	11/30/16 22:38	
Vinyl chloride		ND	3	5	B6L0062	11/30/2016	11/30/16 22:38	
Surrogate: 4-Bromofluorobenzene	*109 %*		*79.2 - 147*		B6L0062	11/30/2016	*11/30/16 22:38*	

Gasoline Range Organics in Air by TO-3

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**390**	200	2	B6L0163	12/02/2016	12/02/16 13:10	
Surrogate: 4-Bromofluorobenzene	*96.8 %*		*70 - 130*		B6L0163	12/02/2016	*12/02/16 13:10*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3

Lab ID: 1604252-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:17	
1,1,1-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
1,1,2,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:17	
1,1,2-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
1,1-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
1,1-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
1,1-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2,3-Trichloropropane	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2,4-Trichlorobenzene	ND	9	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2,4-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2-Dibromo-3-chloropropane	ND	10	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2-Dibromoethane	ND	10	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
1,2-Dichloropropane	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
1,3,5-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
1,3-Butadiene	ND	3	5	B6L0062	11/30/2016	11/30/16 23:17	
1,3-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	
1,4-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	
1,4-Dioxane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
2,2,4-Trimethylpentane	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
2-Butanone	**10**	4	5	B6L0062	11/30/2016	11/30/16 23:17	
2-Chloroethyl vinyl ether	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
2-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
2-Hexanone	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
2-Propanol	**20**	3	5	B6L0062	11/30/2016	11/30/16 23:17	
4-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
4-Ethyl Toluene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
4-Methyl-2-pentanone	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
Acetone	**270**	6	10	B6L0062	12/01/2016	12/01/16 07:22	
Acetonitrile	**10**	2	5	B6L0062	11/30/2016	11/30/16 23:17	
Acrolein	ND	3	5	B6L0062	11/30/2016	11/30/16 23:17	
Acrylonitrile	ND	3	5	B6L0062	11/30/2016	11/30/16 23:17	
Benzene	**70**	4	5	B6L0062	11/30/2016	11/30/16 23:17	
Benzyl chloride	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Bromobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	
Bromodichloromethane	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3

Lab ID: 1604252-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	10	5	B6L0062	11/30/2016	11/30/16 23:17	
Bromomethane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
Carbon disulfide	**10**	4	5	B6L0062	11/30/2016	11/30/16 23:17	
Carbon tetrachloride	ND	8	5	B6L0062	11/30/2016	11/30/16 23:17	
Chlorobenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Chloroethane	ND	3	5	B6L0062	11/30/2016	11/30/16 23:17	
Chloroform	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Chloromethane	ND	3	5	B6L0062	11/30/2016	11/30/16 23:17	
cis-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
cis-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Cyclohexane	**4**	4	5	B6L0062	11/30/2016	11/30/16 23:17	
Dibromochloromethane	ND	10	5	B6L0062	11/30/2016	11/30/16 23:17	
Dibromomethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:17	
Dichlorodifluoromethane	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Dichlorotetrafluoroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:17	
Ethanol	**20**	2	5	B6L0062	11/30/2016	11/30/16 23:17	
Ethylbenzene	**8**	5	5	B6L0062	11/30/2016	11/30/16 23:17	
Freon-113	ND	10	5	B6L0062	11/30/2016	11/30/16 23:17	
Hexachlorobutadiene	ND	10	5	B6L0062	11/30/2016	11/30/16 23:17	
Isopropylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
m,p-Xylene	**40**	20	5	B6L0062	11/30/2016	11/30/16 23:17	
Methylene chloride	ND	4	5	B6L0062	11/30/2016	11/30/16 23:17	
MTBE	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
n-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
n-Propylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Naphthalene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
o-Xylene	**5**	5	5	B6L0062	11/30/2016	11/30/16 23:17	
p-Isopropyltoluene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
sec-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
Styrene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
tert-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	
Tetrachloroethene	**50**	8	5	B6L0062	11/30/2016	11/30/16 23:17	
Toluene	**90**	5	5	B6L0062	11/30/2016	11/30/16 23:17	
trans-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:17	
trans-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:17	
Trichloroethene	**10**	7	5	B6L0062	11/30/2016	11/30/16 23:17	
Trichlorofluoromethane	ND	7	5	B6L0062	11/30/2016	11/30/16 23:17	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3

Lab ID: 1604252-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	4	5	B6L0062	11/30/2016	11/30/16 23:17	
Vinyl chloride		ND	3	5	B6L0062	11/30/2016	11/30/16 23:17	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B6L0062	12/01/2016	*12/01/16 07:22*	
Surrogate: 4-Bromofluorobenzene	*105 %*		*79.2 - 147*		B6L0062	11/30/2016	*11/30/16 23:17*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1500**	200	2	B6L0163	12/02/2016	12/02/16 13:54	
Surrogate: 4-Bromofluorobenzene	*81.2 %*		*70 - 130*		B6L0163	12/02/2016	*12/02/16 13:54*	E3, E4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-4

Lab ID: 1604252-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:55	
1,1,1-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
1,1,2,2-Tetrachloroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:55	
1,1,2-Trichloroethane	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
1,1-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
1,1-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
1,1-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2,3-Trichloropropane	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2,4-Trichlorobenzene	ND	9	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2,4-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2-Dibromo-3-chloropropane	ND	10	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2-Dibromoethane	ND	10	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2-Dichloroethane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
1,2-Dichloropropane	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
1,3,5-Trimethylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
1,3-Butadiene	ND	3	5	B6L0062	11/30/2016	11/30/16 23:55	
1,3-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
1,4-Dichlorobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
1,4-Dioxane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
2,2,4-Trimethylpentane	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
2-Butanone	**5**	4	5	B6L0062	11/30/2016	11/30/16 23:55	
2-Chloroethyl vinyl ether	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
2-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
2-Hexanone	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
2-Propanol	**7**	3	5	B6L0062	11/30/2016	11/30/16 23:55	
4-Chlorotoluene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
4-Ethyl Toluene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
4-Methyl-2-pentanone	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
Acetone	**200**	6	10	B6L0062	12/01/2016	12/01/16 08:00	
Acetonitrile	ND	2	5	B6L0062	11/30/2016	11/30/16 23:55	
Acrolein	ND	3	5	B6L0062	11/30/2016	11/30/16 23:55	
Acrylonitrile	ND	3	5	B6L0062	11/30/2016	11/30/16 23:55	
Benzene	ND	4	5	B6L0062	11/30/2016	11/30/16 23:55	
Benzyl chloride	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Bromobenzene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
Bromodichloromethane	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-4

Lab ID: 1604252-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	10	5	B6L0062	11/30/2016	11/30/16 23:55	
Bromomethane	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
Carbon disulfide	**5**	4	5	B6L0062	11/30/2016	11/30/16 23:55	
Carbon tetrachloride	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
Chlorobenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Chloroethane	ND	3	5	B6L0062	11/30/2016	11/30/16 23:55	
Chloroform	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Chloromethane	ND	3	5	B6L0062	11/30/2016	11/30/16 23:55	
cis-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
cis-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Cyclohexane	ND	4	5	B6L0062	11/30/2016	11/30/16 23:55	
Dibromochloromethane	ND	10	5	B6L0062	11/30/2016	11/30/16 23:55	
Dibromomethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:55	
Dichlorodifluoromethane	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Dichlorotetrafluoroethane	ND	9	5	B6L0062	11/30/2016	11/30/16 23:55	
Ethanol	**10**	2	5	B6L0062	11/30/2016	11/30/16 23:55	
Ethylbenzene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
Freon-113	ND	10	5	B6L0062	11/30/2016	11/30/16 23:55	
Hexachlorobutadiene	ND	10	5	B6L0062	11/30/2016	11/30/16 23:55	
Isopropylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
m,p-Xylene	ND	20	5	B6L0062	11/30/2016	11/30/16 23:55	
Methylene chloride	ND	4	5	B6L0062	11/30/2016	11/30/16 23:55	
MTBE	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
n-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
n-Propylbenzene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Naphthalene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
o-Xylene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
p-Isopropyltoluene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
sec-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
Styrene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
tert-Butylbenzene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
Tetrachloroethene	ND	8	5	B6L0062	11/30/2016	11/30/16 23:55	
Toluene	**30**	5	5	B6L0062	11/30/2016	11/30/16 23:55	
trans-1,2-Dichloroethene	ND	5	5	B6L0062	11/30/2016	11/30/16 23:55	
trans-1,3-Dichloropropene	ND	6	5	B6L0062	11/30/2016	11/30/16 23:55	
Trichloroethene	ND	7	5	B6L0062	11/30/2016	11/30/16 23:55	
Trichlorofluoromethane	**10**	7	5	B6L0062	11/30/2016	11/30/16 23:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-4

Lab ID: 1604252-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	4	5	B6L0062	11/30/2016	11/30/16 23:55	
Vinyl chloride		ND	3	5	B6L0062	11/30/2016	11/30/16 23:55	
Surrogate: 4-Bromofluorobenzene	*107 %*		*79.2 - 147*		B6L0062	12/01/2016	*12/01/16 08:00*	
Surrogate: 4-Bromofluorobenzene	*106 %*		*79.2 - 147*		B6L0062	11/30/2016	*11/30/16 23:55*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**370**	200	2	B6L0163	12/02/2016	12/02/16 14:37	
Surrogate: 4-Bromofluorobenzene	*101 %*		*70 - 130*		B6L0163	12/02/2016	*12/02/16 14:37*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

QUALITY CONTROL SECTION

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0062 - No_Prep_AIR										
Blank (B6L0062-BLK1)					Prepared: 11/30/2016 Analyzed: 11/30/2016					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0062 - No_Prep_AIR (continued)										
Blank (B6L0062-BLK1) - Continued					Prepared: 11/30/2016 Analyzed: 11/30/2016					
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*21.76*			*17.8935*		*122*	*79.2 - 147*			
LCS (B6L0062-BS1)					Prepared: 11/30/2016 Analyzed: 11/30/2016					
1,1,1,2-Tetrachloroethane	13.799	2	0.57	13.7299		100	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0062 - No_Prep_AIR (continued)										
LCS (B6L0062-BS1) - Continued					Prepared: 11/30/2016 Analyzed: 11/30/2016					
1,1,1-Trichloroethane	10.530	1	0.58	10.9123		96.5	70 - 130			
1,1,2,2-Tetrachloroethane	12.837	2	0.77	13.7299		93.5	70 - 130			
1,1,2-Trichloroethane	8.675	1	0.45	10.9123		79.5	70 - 130			
1,1-Dichloroethane	7.204	1	0.37	8.09480		89.0	70 - 130			
1,1-Dichloroethene	6.899	0.99	0.34	7.92990		87.0	70 - 130			
1,1-Dichloropropene	8.714	1	0.37	9.07722		96.0	70 - 130			
1,2,3-Trichloropropane	13.447	2	0.58	12.0597		112	70 - 130			
1,2,4-Trichlorobenzene	16.846	2	0.73	14.8422		114	70 - 130			
1,2,4-Trimethylbenzene	9.389	1	0.54	9.83166		95.5	70 - 130			
1,2-Dibromo-3-chloropropane	21.652	2	1	19.3319		112	70 - 130			
1,2-Dibromoethane	13.523	2	0.73	15.3670		88.0	70 - 130			
1,2-Dichlorobenzene	10.942	2	0.54	12.0246		91.0	70 - 130			
1,2-Dichloroethane	7.447	1	0.34	8.09480		92.0	70 - 130			
1,2-Dichloropropane	7.347	1	0.41	9.24213		79.5	70 - 130			
1,3,5-Trimethylbenzene	9.340	1	0.51	9.83166		95.0	70 - 130			
1,3-Butadiene	3.783	0.55	0.39	4.42454		85.5	70 - 130			
1,3-Dichlorobenzene	11.243	2	0.56	12.0246		93.5	70 - 130			
1,4-Dichlorobenzene	10.882	2	0.51	12.0246		90.5	70 - 130			
1,4-Dioxane	7.063	0.90	0.65	7.20695		98.0	70 - 130			
2,2,4-Trimethylpentane	8.036	1	0.35	9.34388		86.0	70 - 130			
2-Butanone	5.249	0.74	0.24	5.89824		89.0	70 - 130			
2-Chloroethyl vinyl ether	7.016	1	0.22	8.71583		80.5	70 - 130			
2-Chlorotoluene	9.474	1	0.50	10.3544		91.5	70 - 130			
2-Hexanone	6.268	1	0.43	8.19296		76.5	70 - 130			
2-Propanol	4.350	0.61	0.26	4.91534		88.5	70 - 130			
4-Chlorotoluene	10.199	1	0.47	10.3544		98.5	70 - 130			
4-Ethyl Toluene	9.193	1	0.47	9.83166		93.5	70 - 130			
4-Methyl-2-pentanone	6.636	1	0.30	8.19296		81.0	70 - 130			
Acetone	4.252	0.59	0.26	4.75084		89.5	70 - 130			
Acetonitrile	2.888	0.42	0.14	3.35804		86.0	70 - 130			
Acrolein	3.371	0.57	0.22	4.58593		73.5	70 - 130			
Acrylonitrile	3.581	0.54	0.18	4.34053		82.5	70 - 130			
Benzene	5.016	0.80	0.28	6.38953		78.5	70 - 130			
Benzyl chloride	9.888	1	0.37	10.3544		95.5	70 - 130			
Bromobenzene	12.651	2	0.59	12.8432		98.5	70 - 130			
Bromodichloromethane	12.128	2	0.70	13.4011		90.5	70 - 130			
Bromoform	19.743	3	0.90	20.6733		95.5	70 - 130			
Bromomethane	6.989	0.97	0.46	7.76597		90.0	70 - 130			
Carbon disulfide	5.543	0.78	0.31	6.22847		89.0	70 - 130			
Carbon tetrachloride	11.639	2	0.43	12.5826		92.5	70 - 130			
Chlorobenzene	8.471	1	0.41	9.20712		92.0	70 - 130			
Chloroethane	4.591	0.66	0.28	5.27722		87.0	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0062 - No_Prep_AIR (continued)										
LCS (B6L0062-BS1) - Continued					Prepared: 11/30/2016 Analyzed: 11/30/2016					
Chloroform	8.935	1	0.50	9.76499		91.5	70 - 130			
Chloromethane	3.510	0.52	0.22	4.12982		85.0	70 - 130			
cis-1,2-Dichloroethene	7.018	0.99	0.28	7.92990		88.5	70 - 130			
cis-1,3-Dichloropropene	7.126	1	0.33	9.07724		78.5	70 - 130			
Cyclohexane	5.680	0.86	0.25	6.88425		82.5	70 - 130			
Dibromochloromethane	14.652	2	0.83	17.0371		86.0	70 - 130			
Dibromomethane	14.717	2	0.55	14.2196		104	70 - 130			
Dichlorodifluoromethane	9.940	1	0.56	9.89063		100	70 - 130			
Dichlorotetrafluoroethane	14.331	2	0.76	13.9812		102	70 - 130			
Ethanol	3.278	0.47	0.20	3.76834		87.0	70 - 130			
Ethylbenzene	7.990	1	0.35	8.68425		92.0	70 - 130			
Freon-113	14.101	2	0.58	15.3272		92.0	70 - 130			
Hexachlorobutadiene	25.916	3	1	21.3300		122	70 - 130			
Isopropylbenzene	9.094	1	0.52	9.83166		92.5	70 - 130			
m,p-Xylene	32.740	4	1	34.7370		94.3	70 - 130			
Methylene chloride	6.148	0.87	0.31	6.94740		88.5	70 - 130			
MTBE	6.309	0.90	0.33	7.21047		87.5	70 - 130			
n-Butylbenzene	10.265	1	0.42	10.9790		93.5	70 - 130			
n-Propylbenzene	9.094	1	0.41	9.83166		92.5	70 - 130			
Naphthalene	9.331	1	0.36	10.4843		89.0	70 - 130			
o-Xylene	8.293	1	0.40	8.68425		95.5	70 - 130			
p-Isopropyltoluene	11.638	1	0.51	10.9790		106	70 - 130			
sec-Butylbenzene	10.265	1	0.56	10.9790		93.5	70 - 130			
Styrene	7.582	1	0.44	8.51934		89.0	70 - 130			
tert-Butylbenzene	10.814	1	0.62	10.9790		98.5	70 - 130			
Tetrachloroethene	11.462	2	0.47	13.5650		84.5	70 - 130			
Toluene	6.105	0.94	0.28	7.53688		81.0	70 - 130			
trans-1,2-Dichloroethene	6.661	0.99	0.34	7.92990		84.0	70 - 130			
trans-1,3-Dichloropropene	7.489	1	0.34	9.07722		82.5	70 - 130			
Trichloroethene	9.350	1	0.47	10.7474		87.0	70 - 130			
Trichlorofluoromethane	11.124	1	0.53	11.2366		99.0	70 - 130			
Vinyl acetate	6.831	0.88	0.38	7.04204		97.0	70 - 130			
Vinyl chloride	4.320	0.64	0.21	5.11231		84.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			
LCS Dup (B6L0062-BSD1)					Prepared: 11/30/2016 Analyzed: 11/30/2016					
1,1,1,2-Tetrachloroethane	13.318	2	0.57	13.7299		97.0	70 - 130	3.54	20	
1,1,1-Trichloroethane	10.203	1	0.58	10.9123		93.5	70 - 130	3.16	20	
1,1,2,2-Tetrachloroethane	12.837	2	0.77	13.7299		93.5	70 - 130	0.00	20	
1,1,2-Trichloroethane	9.166	1	0.45	10.9123		84.0	70 - 130	5.50	20	
1,1-Dichloroethane	7.326	1	0.37	8.09480		90.5	70 - 130	1.67	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0062 - No_Prep_AIR (continued)										
LCS Dup (B6L0062-BSD1) - Continued					Prepared: 11/30/2016 Analyzed: 11/30/2016					
1,1-Dichloroethene	7.018	0.99	0.34	7.92990		88.5	70 - 130	1.71	20	
1,1-Dichloropropene	8.351	1	0.37	9.07722		92.0	70 - 130	4.26	20	
1,2,3-Trichloropropane	13.808	2	0.58	12.0597		114	70 - 130	2.65	20	
1,2,4-Trichlorobenzene	18.775	2	0.73	14.8422		126	70 - 130	10.8	20	
1,2,4-Trimethylbenzene	9.340	1	0.54	9.83166		95.0	70 - 130	0.525	20	
1,2-Dibromo-3-chloropropane	23.102	2	1	19.3319		120	70 - 130	6.48	20	
1,2-Dibromoethane	12.370	2	0.73	15.3670		80.5	70 - 130	8.90	20	
1,2-Dichlorobenzene	11.303	2	0.54	12.0246		94.0	70 - 130	3.24	20	
1,2-Dichloroethane	7.690	1	0.34	8.09480		95.0	70 - 130	3.21	20	
1,2-Dichloropropane	7.440	1	0.41	9.24213		80.5	70 - 130	1.25	20	
1,3,5-Trimethylbenzene	9.340	1	0.51	9.83166		95.0	70 - 130	0.00	20	
1,3-Butadiene	3.849	0.55	0.39	4.42454		87.0	70 - 130	1.74	20	
1,3-Dichlorobenzene	11.484	2	0.56	12.0246		95.5	70 - 130	2.12	20	
1,4-Dichlorobenzene	11.243	2	0.51	12.0246		93.5	70 - 130	3.26	20	
1,4-Dioxane	7.207	0.90	0.65	7.20695		100	70 - 130	2.02	20	
2,2,4-Trimethylpentane	8.223	1	0.35	9.34388		88.0	70 - 130	2.30	20	
2-Butanone	5.190	0.74	0.24	5.89824		88.0	70 - 130	1.13	20	
2-Chloroethyl vinyl ether	6.145	1	0.22	8.71583		70.5	70 - 130	13.2	20	
2-Chlorotoluene	9.630	1	0.50	10.3544		93.0	70 - 130	1.63	20	
2-Hexanone	7.374	1	0.43	8.19296		90.0	70 - 130	16.2	20	
2-Propanol	4.522	0.61	0.26	4.91534		92.0	70 - 130	3.88	20	
4-Chlorotoluene	10.147	1	0.47	10.3544		98.0	70 - 130	0.509	20	
4-Ethyl Toluene	9.291	1	0.47	9.83166		94.5	70 - 130	1.06	20	
4-Methyl-2-pentanone	6.841	1	0.30	8.19296		83.5	70 - 130	3.04	20	
Acetone	4.276	0.59	0.26	4.75084		90.0	70 - 130	0.557	20	
Acetonitrile	3.123	0.42	0.14	3.35804		93.0	70 - 130	7.82	20	
Acrolein	3.439	0.57	0.22	4.58593		75.0	70 - 130	2.02	20	
Acrylonitrile	3.516	0.54	0.18	4.34053		81.0	70 - 130	1.83	20	
Benzene	5.271	0.80	0.28	6.38953		82.5	70 - 130	4.97	20	
Benzyl chloride	10.044	1	0.37	10.3544		97.0	70 - 130	1.56	20	
Bromobenzene	12.972	2	0.59	12.8432		101	70 - 130	2.51	20	
Bromodichloromethane	12.463	2	0.70	13.4011		93.0	70 - 130	2.72	20	
Bromoform	19.743	3	0.90	20.6733		95.5	70 - 130	0.00	20	
Bromomethane	7.067	0.97	0.46	7.76597		91.0	70 - 130	1.10	20	
Carbon disulfide	5.574	0.78	0.31	6.22847		89.5	70 - 130	0.560	20	
Carbon tetrachloride	12.016	2	0.43	12.5826		95.5	70 - 130	3.19	20	
Chlorobenzene	8.609	1	0.41	9.20712		93.5	70 - 130	1.62	20	
Chloroethane	4.565	0.66	0.28	5.27722		86.5	70 - 130	0.576	20	
Chloroform	8.837	1	0.50	9.76499		90.5	70 - 130	1.10	20	
Chloromethane	3.552	0.52	0.22	4.12982		86.0	70 - 130	1.17	20	
cis-1,2-Dichloroethene	6.978	0.99	0.28	7.92990		88.0	70 - 130	0.567	20	
cis-1,3-Dichloropropene	7.579	1	0.33	9.07724		83.5	70 - 130	6.17	20	

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0062 - No_Prep_AIR (continued)										
LCS Dup (B6L0062-BSD1) - Continued					Prepared: 11/30/2016 Analyzed: 11/30/2016					
Cyclohexane	6.127	0.86	0.25	6.88425		89.0	70 - 130	7.58	20	
Dibromochloromethane	15.589	2	0.83	17.0371		91.5	70 - 130	6.20	20	
Dibromomethane	14.646	2	0.55	14.2196		103	70 - 130	0.484	20	
Dichlorodifluoromethane	10.039	1	0.56	9.89063		102	70 - 130	0.990	20	
Dichlorotetrafluoroethane	14.750	2	0.76	13.9812		106	70 - 130	2.88	20	
Ethanol	3.241	0.47	0.20	3.76834		86.0	70 - 130	1.16	20	
Ethylbenzene	8.163	1	0.35	8.68425		94.0	70 - 130	2.15	20	
Freon-113	13.871	2	0.58	15.3272		90.5	70 - 130	1.64	20	
Hexachlorobutadiene	26.556	3	1	21.3300		124	70 - 130	2.44	20	
Isopropylbenzene	9.242	1	0.52	9.83166		94.0	70 - 130	1.61	20	
m,p-Xylene	33.000	4	1	34.7370		95.0	70 - 130	0.793	20	
Methylene chloride	6.114	0.87	0.31	6.94740		88.0	70 - 130	0.567	20	
MTBE	6.345	0.90	0.33	7.21047		88.0	70 - 130	0.570	20	
n-Butylbenzene	10.320	1	0.42	10.9790		94.0	70 - 130	0.533	20	
n-Propylbenzene	9.488	1	0.41	9.83166		96.5	70 - 130	4.23	20	
Naphthalene	10.065	1	0.36	10.4843		96.0	70 - 130	7.57	20	
o-Xylene	8.337	1	0.40	8.68425		96.0	70 - 130	0.522	20	
p-Isopropyltoluene	11.857	1	0.51	10.9790		108	70 - 130	1.87	20	
sec-Butylbenzene	10.430	1	0.56	10.9790		95.0	70 - 130	1.59	20	
Styrene	7.838	1	0.44	8.51934		92.0	70 - 130	3.31	20	
tert-Butylbenzene	10.759	1	0.62	10.9790		98.0	70 - 130	0.509	20	
Tetrachloroethene	12.005	2	0.47	13.5650		88.5	70 - 130	4.62	20	
Toluene	6.293	0.94	0.28	7.53688		83.5	70 - 130	3.04	20	
trans-1,2-Dichloroethene	6.859	0.99	0.34	7.92990		86.5	70 - 130	2.93	20	
trans-1,3-Dichloropropene	7.716	1	0.34	9.07722		85.0	70 - 130	2.99	20	
Trichloroethene	9.565	1	0.47	10.7474		89.0	70 - 130	2.27	20	
Trichlorofluoromethane	10.843	1	0.53	11.2366		96.5	70 - 130	2.56	20	
Vinyl acetate	6.866	0.88	0.38	7.04204		97.5	70 - 130	0.514	20	
Vinyl chloride	4.422	0.64	0.21	5.11231		86.5	70 - 130	2.34	20	
Surrogate: 4-Bromofluorobenzene	*18.97*			*17.8935*		*106*	*79.2 - 147*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0163 - No_Prep_AIR										
Blank (B6L0163-BLK1)						Prepared: 12/2/2016 Analyzed: 12/2/2016				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*16.03*			*17.8935*		*89.6*	*70 - 130*			
LCS (B6L0163-BS1)						Prepared: 12/2/2016 Analyzed: 12/2/2016				
Gasoline Range Organics	895.337	100	70	817.996		109	70 - 130			
Surrogate: 4-Bromofluorobenzene	*17.82*			*17.8935*		*99.6*	*70 - 130*			
LCS Dup (B6L0163-BSD1)						Prepared: 12/2/2016 Analyzed: 12/2/2016				
Gasoline Range Organics	804.744	100	70	817.996		98.4	70 - 130	10.7	20	
Surrogate: 4-Bromofluorobenzene	*17.39*			*17.8935*		*97.2*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St. Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Notes and Definitions

E4	Result value is estimated.
E3	Internal standard recoveries did not meet method acceptance due to matrix interference. Result value is estimated.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport			Sample Conditions Upon Receipt					
			Condition	Y	N	Condition	Y	N
☐ Client	☑ ATL		1. CHILLED	☐	☑	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx	☐ OnTrac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO			3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:			4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand

Address:

City: State: Zip:

Tel:

Fax:

SEND REPORT TO:

Attn: Naresh Belkma Email:

Company: 949- 777-1275

Address:

City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO

Attn: Email:

Company:

Address:

City: State: Zip:

PROJECT SAMPLES

Project Name: 6th St. Bridge

Project No.: 15-003

Sampler: DAT

Quote No: TO15

PO #:

Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	TO3 PT	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	VOA's	TAT	Container #	Container Type	Container Material	Preservative	REMARKS
1	1604252-01	VMW-1	11/23	7:34		X						X						/	5	1	7	3		
2	-2	VMW-1 Dup		7:45		X						X						/		1	7	3		
3	-3	VMW-2		7:54		X						X						/		1	7	3		
4	-4	VMW-3		8:06		X						X						/		1	7	3		
5	-5	VMW-4		7:07		X						X						/		1	7	3		
6					PT																			
7																								
8																								
9																								
10																								

TAT: 5 = 5 DAY

Container Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister

Container Material: 1=Glass; 2=Plastic; 3=Metal

Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10-15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name

Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terres	11/23	9:12	C. Aguilera	11/23/14	9:12
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

March 26, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1604331
Client Reference : Parcel 32 6th St Bridge, 15-003

Enclosed are the results for sample(s) received on November 28, 2016 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.		Project Number :	Parcel 32 6th St Bridge, 15-003
250 Goddard		Report To :	Naresh Bellana
Irvine , CA 92618		Reported :	03/26/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VMW-1 10'	1604331-01	Air	11/28/16 7:01	11/28/16 8:42
VMW-2 5'	1604331-02	Air	11/28/16 7:19	11/28/16 8:42
VMW-3 15'	1604331-03	Air	11/28/16 7:35	11/28/16 8:42
VMW-3 Dupl. 15'	1604331-04	Air	11/28/16 7:45	11/28/16 8:42
VMW-4 10'	1604331-05	Air	11/28/16 6:35	11/28/16 8:42

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1 10'

Lab ID: 1604331-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,1,1-Trichloroethane	**5**	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,1,2,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,1,2-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,1-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,1-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,1-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2,3-Trichloropropane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2,4-Trichlorobenzene	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2,4-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2-Dibromo-3-chloropropane	ND	6	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2-Dibromoethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,2-Dichloropropane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,3,5-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,3-Butadiene	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,3-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,4-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
1,4-Dioxane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
2,2,4-Trimethylpentane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
2-Butanone	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
2-Chloroethyl vinyl ether	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
2-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
2-Hexanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
2-Propanol	**6000**	120	200	B6L0286	12/06/2016	12/06/16 16:29	
4-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
4-Ethyl Toluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
4-Methyl-2-pentanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Acetone	**10**	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Acetonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Acrolein	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Acrylonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Benzene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Benzyl chloride	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Bromobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Bromodichloromethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1 10'

Lab ID: 1604331-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	6	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Bromomethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Carbon disulfide	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Carbon tetrachloride	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Chlorobenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Chloroethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Chloroform	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Chloromethane	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
cis-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
cis-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Cyclohexane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Dibromochloromethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Dibromomethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Dichlorodifluoromethane	**8**	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Dichlorotetrafluoroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Ethanol	**2**	1	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Ethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Freon-113	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Hexachlorobutadiene	ND	7	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Isopropylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
m,p-Xylene	ND	10	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Methylene chloride	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
MTBE	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
n-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
n-Propylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Naphthalene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
o-Xylene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
p-Isopropyltoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
sec-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Styrene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
tert-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Tetrachloroethene	**10**	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Toluene	**60**	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
trans-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
trans-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Trichloroethene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Trichlorofluoromethane	**20**	4	2.5	B6L0222	12/05/2016	12/05/16 16:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-1 10'

Lab ID: 1604331-01

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Vinyl chloride		ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:04	
Surrogate: 4-Bromofluorobenzene	*98.4 %*		*79.2 - 147*		B6L0286	12/06/2016	*12/06/16 16:29*	
Surrogate: 4-Bromofluorobenzene	*102 %*		*79.2 - 147*		B6L0222	12/05/2016	*12/05/16 16:04*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	260	2.5	B6L0202	12/05/2016	12/05/16 16:04	D1
Surrogate: 4-Bromofluorobenzene	*90.4 %*		*70 - 130*		B6L0202	12/05/2016	*12/05/16 16:04*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-2 5'

Lab ID: 1604331-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,1,1-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,1,2,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,1,2-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,1-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,1-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,1-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2,3-Trichloropropane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2,4-Trichlorobenzene	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2,4-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2-Dibromo-3-chloropropane	ND	6	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2-Dibromoethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,2-Dichloropropane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,3,5-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,3-Butadiene	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,3-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,4-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
1,4-Dioxane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
2,2,4-Trimethylpentane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
2-Butanone	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
2-Chloroethyl vinyl ether	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
2-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
2-Hexanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
2-Propanol	**3200**	120	200	B6L0286	12/06/2016	12/06/16 17:07	
4-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
4-Ethyl Toluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
4-Methyl-2-pentanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Acetone	**10**	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Acetonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Acrolein	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Acrylonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Benzene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Benzyl chloride	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Bromobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Bromodichloromethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-2 5'

Lab ID: 1604331-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	6	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Bromomethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Carbon disulfide	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Carbon tetrachloride	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Chlorobenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Chloroethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Chloroform	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Chloromethane	ND	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
cis-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
cis-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Cyclohexane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Dibromochloromethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Dibromomethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Dichlorodifluoromethane	**4**	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Dichlorotetrafluoroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Ethanol	**2**	1	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Ethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Freon-113	ND	5	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Hexachlorobutadiene	ND	7	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Isopropylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
m,p-Xylene	ND	10	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Methylene chloride	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
MTBE	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
n-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
n-Propylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Naphthalene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
o-Xylene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
p-Isopropyltoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
sec-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Styrene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
tert-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Tetrachloroethene	**9**	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Toluene	**60**	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
trans-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
trans-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Trichloroethene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Trichlorofluoromethane	**20**	4	2.5	B6L0222	12/05/2016	12/05/16 16:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-2 5'

Lab ID: 1604331-02

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Vinyl chloride		ND	2	2.5	B6L0222	12/05/2016	12/05/16 16:47	
Surrogate: 4-Bromofluorobenzene	*93.6 %*		*79.2 - 147*		B6L0286	12/06/2016	*12/06/16 17:07*	
Surrogate: 4-Bromofluorobenzene	*98.8 %*		*79.2 - 147*		B6L0222	12/05/2016	*12/05/16 16:47*	

Gasoline Range Organics in Air by TO-3 **Analyst: LT**

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	260	2.5	B6L0202	12/05/2016	12/05/16 16:47	D1
Surrogate: 4-Bromofluorobenzene	*90.4 %*		*70 - 130*		B6L0202	12/05/2016	*12/05/16 16:47*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3 15'

Lab ID: 1604331-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,1,1-Trichloroethane	**7**	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,1,2,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,1,2-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,1-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,1-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,1-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2,3-Trichloropropane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2,4-Trichlorobenzene	ND	5	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2,4-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2-Dibromo-3-chloropropane	ND	6	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2-Dibromoethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,2-Dichloropropane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,3,5-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,3-Butadiene	ND	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,3-Dichlorobenzene	**4**	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,4-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
1,4-Dioxane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
2,2,4-Trimethylpentane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
2-Butanone	**7**	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
2-Chloroethyl vinyl ether	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
2-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
2-Hexanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
2-Propanol	**2000**	120	200	B6L0286	12/06/2016	12/06/16 17:48	
4-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
4-Ethyl Toluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
4-Methyl-2-pentanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Acetone	**100**	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Acetonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Acrolein	ND	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Acrylonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Benzene	**30**	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Benzyl chloride	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Bromobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Bromodichloromethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3 15'

Lab ID: 1604331-03

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	6	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Bromomethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Carbon disulfide	**20**	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Carbon tetrachloride	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Chlorobenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Chloroethane	**5**	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Chloroform	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Chloromethane	**3**	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
cis-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
cis-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Cyclohexane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Dibromochloromethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Dibromomethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Dichlorodifluoromethane	**4**	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Dichlorotetrafluoroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Ethanol	**10**	1	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Ethylbenzene	**3**	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Freon-113	ND	5	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Hexachlorobutadiene	ND	7	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Isopropylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
m,p-Xylene	**10**	10	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Methylene chloride	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
MTBE	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
n-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
n-Propylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Naphthalene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
o-Xylene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
p-Isopropyltoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
sec-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Styrene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
tert-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Tetrachloroethene	**9**	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Toluene	**70**	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
trans-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
trans-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Trichloroethene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Trichlorofluoromethane	**10**	4	2.5	B6L0222	12/05/2016	12/05/16 17:29	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3 15'
Lab ID: 1604331-03

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Vinyl chloride		ND	2	2.5	B6L0222	12/05/2016	12/05/16 17:29	
Surrogate: 4-Bromofluorobenzene	*118 %*		*79.2 - 147*		B6L0222	12/05/2016	*12/05/16 17:29*	
Surrogate: 4-Bromofluorobenzene	*99.2 %*		*79.2 - 147*		B6L0286	12/06/2016	*12/06/16 17:48*	

Gasoline Range Organics in Air by TO-3

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**450**	260	2.5	B6L0202	12/05/2016	12/05/16 17:29	
Surrogate: 4-Bromofluorobenzene	*80.0 %*		*70 - 130*		B6L0202	12/05/2016	*12/05/16 17:29*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3 Dupl. 15'
Lab ID: 1604331-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,1,1-Trichloroethane	**6**	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,1,2,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,1,2-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,1-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,1-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,1-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2,3-Trichloropropane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2,4-Trichlorobenzene	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2,4-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2-Dibromo-3-chloropropane	ND	6	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2-Dibromoethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,2-Dichloropropane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,3,5-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,3-Butadiene	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,3-Dichlorobenzene	**7**	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,4-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
1,4-Dioxane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
2,2,4-Trimethylpentane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
2-Butanone	**6**	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
2-Chloroethyl vinyl ether	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
2-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
2-Hexanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
2-Propanol	**12000**	180	300	B6L0286	12/06/2016	12/06/16 18:28	
4-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
4-Ethyl Toluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
4-Methyl-2-pentanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Acetone	**100**	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Acetonitrile	**5**	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Acrolein	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Acrylonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Benzene	**20**	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Benzyl chloride	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Bromobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Bromodichloromethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3 Dupl. 15'
Lab ID: 1604331-04

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	6	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Bromomethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Carbon disulfide	**20**	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Carbon tetrachloride	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Chlorobenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Chloroethane	**4**	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Chloroform	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Chloromethane	**3**	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
cis-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
cis-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Cyclohexane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Dibromochloromethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Dibromomethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Dichlorodifluoromethane	**4**	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Dichlorotetrafluoroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Ethanol	**20**	1	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Ethylbenzene	**3**	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Freon-113	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Hexachlorobutadiene	ND	7	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Isopropylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
m,p-Xylene	**20**	10	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Methylene chloride	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
MTBE	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
n-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
n-Propylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Naphthalene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
o-Xylene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
p-Isopropyltoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
sec-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Styrene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
tert-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Tetrachloroethene	**7**	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Toluene	**190**	9	10	B6L0222	12/05/2016	12/05/16 22:20	
trans-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
trans-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Trichloroethene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Trichlorofluoromethane	**10**	4	2.5	B6L0222	12/05/2016	12/05/16 18:12	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-3 Dupl. 15'
Lab ID: 1604331-04

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Vinyl chloride		ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:12	
Surrogate: 4-Bromofluorobenzene	*116 %*		*79.2 - 147*		B6L0222	12/05/2016	*12/05/16 22:20*	
Surrogate: 4-Bromofluorobenzene	*101 %*		*79.2 - 147*		B6L0286	12/06/2016	*12/06/16 18:28*	
Surrogate: 4-Bromofluorobenzene	*102 %*		*79.2 - 147*		B6L0222	12/05/2016	*12/05/16 18:12*	

Gasoline Range Organics in Air by TO-3

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**850**	260	2.5	B6L0202	12/05/2016	12/05/16 18:12	
Surrogate: 4-Bromofluorobenzene	*82.8 %*		*70 - 130*		B6L0202	12/05/2016	*12/05/16 18:12*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-4 10'

Lab ID: 1604331-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,1,1-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,1,2,2-Tetrachloroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,1,2-Trichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,1-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,1-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,1-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2,3-Trichloropropane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2,4-Trichlorobenzene	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2,4-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2-Dibromo-3-chloropropane	ND	6	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2-Dibromoethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2-Dichloroethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,2-Dichloropropane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,3,5-Trimethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,3-Butadiene	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,3-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,4-Dichlorobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
1,4-Dioxane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
2,2,4-Trimethylpentane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
2-Butanone	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
2-Chloroethyl vinyl ether	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
2-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
2-Hexanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
2-Propanol	**4800**	120	200	B6L0286	12/06/2016	12/06/16 19:06	
4-Chlorotoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
4-Ethyl Toluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
4-Methyl-2-pentanone	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Acetone	**30**	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Acetonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Acrolein	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Acrylonitrile	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Benzene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Benzyl chloride	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Bromobenzene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Bromodichloromethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-4 10'

Lab ID: 1604331-05

Volatile Organic Compounds in AIR by TO-15 (Canister) **Analyst: LT**

Analyte	Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromoform	ND	6	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Bromomethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Carbon disulfide	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Carbon tetrachloride	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Chlorobenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Chloroethane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Chloroform	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Chloromethane	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
cis-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
cis-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Cyclohexane	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Dibromochloromethane	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Dibromomethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Dichlorodifluoromethane	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Dichlorotetrafluoroethane	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Ethanol	ND	1	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Ethylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Freon-113	ND	5	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Hexachlorobutadiene	ND	7	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Isopropylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
m,p-Xylene	ND	10	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Methylene chloride	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
MTBE	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
n-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
n-Propylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Naphthalene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
o-Xylene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
p-Isopropyltoluene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
sec-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Styrene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
tert-Butylbenzene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Tetrachloroethene	ND	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Toluene	**90**	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
trans-1,2-Dichloroethene	ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
trans-1,3-Dichloropropene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Trichloroethene	ND	3	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Trichlorofluoromethane	**10**	4	2.5	B6L0222	12/05/2016	12/05/16 18:56	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Client Sample ID VMW-4 10'

Lab ID: 1604331-05

Volatile Organic Compounds in AIR by TO-15 (Canister)

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate		ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Vinyl chloride		ND	2	2.5	B6L0222	12/05/2016	12/05/16 18:56	
Surrogate: 4-Bromofluorobenzene	*92.0 %*		*79.2 - 147*		B6L0286	12/06/2016	*12/06/16 19:06*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*79.2 - 147*		B6L0222	12/05/2016	*12/05/16 18:56*	

Gasoline Range Organics in Air by TO-3

Analyst: LT

Analyte		Result (ug/m³)	PQL (ug/m³)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**360**	260	2.5	B6L0202	12/05/2016	12/05/16 18:56	
Surrogate: 4-Bromofluorobenzene	*86.8 %*		*70 - 130*		B6L0202	12/05/2016	*12/05/16 18:56*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

QUALITY CONTROL SECTION

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0222 - No_Prep_AIR										
Blank (B6L0222-BLK1)					Prepared: 12/5/2016 Analyzed: 12/5/2016					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0222 - No_Prep_AIR (continued)										
Blank (B6L0222-BLK1) - Continued					Prepared: 12/5/2016 Analyzed: 12/5/2016					
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*17.61*			*17.8935*		*98.4*	*79.2 - 147*			
LCS (B6L0222-BS1)					Prepared: 12/5/2016 Analyzed: 12/5/2016					
1,1,1,2-Tetrachloroethane	14.348	2	0.57	13.7299		104	70 - 130			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0222 - No_Prep_AIR (continued)										
LCS (B6L0222-BS1) - Continued					Prepared: 12/5/2016 Analyzed: 12/5/2016					
1,1,1-Trichloroethane	10.203	1	0.58	10.9123		93.5	70 - 130			
1,1,2,2-Tetrachloroethane	13.730	2	0.77	13.7299		100	70 - 130			
1,1,2-Trichloroethane	9.221	1	0.45	10.9123		84.5	70 - 130			
1,1-Dichloroethane	7.123	1	0.37	8.09480		88.0	70 - 130			
1,1-Dichloroethene	6.225	0.99	0.34	7.92990		78.5	70 - 130			
1,1-Dichloropropene	9.168	1	0.37	9.07722		101	70 - 130			
1,2,3-Trichloropropane	22.250	2	0.58	12.0597		184	70 - 130			L5
1,2,4-Trichlorobenzene	35.176	2	0.73	14.8422		237	70 - 130			L5
1,2,4-Trimethylbenzene	10.323	1	0.54	9.83166		105	70 - 130			
1,2-Dibromo-3-chloropropane	42.337	2	1	19.3319		219	70 - 130			L5
1,2-Dibromoethane	13.523	2	0.73	15.3670		88.0	70 - 130			
1,2-Dichlorobenzene	11.423	2	0.54	12.0246		95.0	70 - 130			
1,2-Dichloroethane	8.135	1	0.34	8.09480		100	70 - 130			
1,2-Dichloropropane	7.717	1	0.41	9.24213		83.5	70 - 130			
1,3,5-Trimethylbenzene	9.930	1	0.51	9.83166		101	70 - 130			
1,3-Butadiene	4.026	0.55	0.39	4.42454		91.0	70 - 130			
1,3-Dichlorobenzene	11.964	2	0.56	12.0246		99.5	70 - 130			
1,4-Dichlorobenzene	11.544	2	0.51	12.0246		96.0	70 - 130			
1,4-Dioxane	6.811	0.90	0.65	7.20695		94.5	70 - 130			
2,2,4-Trimethylpentane	8.643	1	0.35	9.34388		92.5	70 - 130			
2-Butanone	5.014	0.74	0.24	5.89824		85.0	70 - 130			
2-Chloroethyl vinyl ether	8.498	1	0.22	8.71583		97.5	70 - 130			
2-Chlorotoluene	10.199	1	0.50	10.3544		98.5	70 - 130			
2-Hexanone	7.619	1	0.43	8.19296		93.0	70 - 130			
2-Propanol	4.399	0.61	0.26	4.91534		89.5	70 - 130			
4-Chlorotoluene	16.878	1	0.47	10.3544		163	70 - 130			L5
4-Ethyl Toluene	9.635	1	0.47	9.83166		98.0	70 - 130			
4-Methyl-2-pentanone	7.128	1	0.30	8.19296		87.0	70 - 130			
Acetone	4.466	0.59	0.26	4.75084		94.0	70 - 130			
Acetonitrile	3.140	0.42	0.14	3.35804		93.5	70 - 130			
Acrolein	3.692	0.57	0.22	4.58593		80.5	70 - 130			
Acrylonitrile	3.299	0.54	0.18	4.34053		76.0	70 - 130			
Benzene	5.207	0.80	0.28	6.38953		81.5	70 - 130			
Benzyl chloride	11.390	1	0.37	10.3544		110	70 - 130			
Bromobenzene	19.714	2	0.59	12.8432		154	70 - 130			L5
Bromodichloromethane	12.932	2	0.70	13.4011		96.5	70 - 130			
Bromoform	20.880	3	0.90	20.6733		101	70 - 130			
Bromomethane	6.989	0.97	0.46	7.76597		90.0	70 - 130			
Carbon disulfide	5.170	0.78	0.31	6.22847		83.0	70 - 130			
Carbon tetrachloride	12.771	2	0.43	12.5826		102	70 - 130			
Chlorobenzene	8.655	1	0.41	9.20712		94.0	70 - 130			
Chloroethane	4.749	0.66	0.28	5.27722		90.0	70 - 130			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0222 - No_Prep_AIR (continued)										
LCS (B6L0222-BS1) - Continued					Prepared: 12/5/2016 Analyzed: 12/5/2016					
Chloroform	8.740	1	0.50	9.76499		89.5	70 - 130			
Chloromethane	3.490	0.52	0.22	4.12982		84.5	70 - 130			
cis-1,2-Dichloroethene	6.304	0.99	0.28	7.92990		79.5	70 - 130			
cis-1,3-Dichloropropene	7.670	1	0.33	9.07724		84.5	70 - 130			
Cyclohexane	6.024	0.86	0.25	6.88425		87.5	70 - 130			
Dibromochloromethane	18.315	2	0.83	17.0371		108	70 - 130			
Dibromomethane	17.135	2	0.55	14.2196		120	70 - 130			
Dichlorodifluoromethane	9.396	1	0.56	9.89063		95.0	70 - 130			
Dichlorotetrafluoroethane	14.401	2	0.76	13.9812		103	70 - 130			
Ethanol	3.354	0.47	0.20	3.76834		89.0	70 - 130			
Ethylbenzene	7.946	1	0.35	8.68425		91.5	70 - 130			
Freon-113	13.488	2	0.58	15.3272		88.0	70 - 130			
Hexachlorobutadiene	52.258	3	1	21.3300		245	70 - 130			L5
Isopropylbenzene	9.488	1	0.52	9.83166		96.5	70 - 130			
m,p-Xylene	34.476	4	1	34.7370		99.3	70 - 130			
Methylene chloride	5.975	0.87	0.31	6.94740		86.0	70 - 130			
MTBE	5.913	0.90	0.33	7.21047		82.0	70 - 130			
n-Butylbenzene	11.363	1	0.42	10.9790		104	70 - 130			
n-Propylbenzene	9.635	1	0.41	9.83166		98.0	70 - 130			
Naphthalene	9.646	1	0.36	10.4843		92.0	70 - 130			
o-Xylene	8.684	1	0.40	8.68425		100	70 - 130			
p-Isopropyltoluene	20.146	1	0.51	10.9790		183	70 - 130			L5
sec-Butylbenzene	11.089	1	0.56	10.9790		101	70 - 130			
Styrene	7.625	1	0.44	8.51934		89.5	70 - 130			
tert-Butylbenzene	11.528	1	0.62	10.9790		105	70 - 130			
Tetrachloroethene	12.208	2	0.47	13.5650		90.0	70 - 130			
Toluene	6.180	0.94	0.28	7.53688		82.0	70 - 130			
trans-1,2-Dichloroethene	6.027	0.99	0.34	7.92990		76.0	70 - 130			
trans-1,3-Dichloropropene	8.124	1	0.34	9.07722		89.5	70 - 130			
Trichloroethene	9.404	1	0.47	10.7474		87.5	70 - 130			
Trichlorofluoromethane	11.124	1	0.53	11.2366		99.0	70 - 130			
Vinyl acetate	6.549	0.88	0.38	7.04204		93.0	70 - 130			
Vinyl chloride	4.243	0.64	0.21	5.11231		83.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.82*			*17.8935*		*105*	*79.2 - 147*			
LCS Dup (B6L0222-BSD1)					Prepared: 12/5/2016 Analyzed: 12/5/2016					
1,1,1,2-Tetrachloroethane	13.593	2	0.57	13.7299		99.0	70 - 130	5.41	20	
1,1,1-Trichloroethane	10.148	1	0.58	10.9123		93.0	70 - 130	0.536	20	
1,1,2,2-Tetrachloroethane	15.446	2	0.77	13.7299		112	70 - 130	11.8	20	
1,1,2-Trichloroethane	9.221	1	0.45	10.9123		84.5	70 - 130	0.00	20	
1,1-Dichloroethane	7.002	1	0.37	8.09480		86.5	70 - 130	1.72	20	

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0222 - No_Prep_AIR (continued)										
LCS Dup (B6L0222-BSD1) - Continued					Prepared: 12/5/2016 Analyzed: 12/5/2016					
1,1-Dichloroethene	6.225	0.99	0.34	7.92990		78.5	70 - 130	0.00	20	
1,1-Dichloropropene	8.714	1	0.37	9.07722		96.0	70 - 130	5.08	20	
1,2,3-Trichloropropane	22.552	2	0.58	12.0597		187	70 - 130	1.35	20	L5
1,2,4-Trichlorobenzene	36.438	2	0.73	14.8422		246	70 - 130	3.52	20	L5
1,2,4-Trimethylbenzene	11.257	1	0.54	9.83166		114	70 - 130	8.66	20	
1,2-Dibromo-3-chloropropane	44.077	2	1	19.3319		228	70 - 130	4.03	20	L5
1,2-Dibromoethane	12.755	2	0.73	15.3670		83.0	70 - 130	5.85	20	
1,2-Dichlorobenzene	12.746	2	0.54	12.0246		106	70 - 130	10.9	20	
1,2-Dichloroethane	8.257	1	0.34	8.09480		102	70 - 130	1.48	20	
1,2-Dichloropropane	8.041	1	0.41	9.24213		87.0	70 - 130	4.11	20	
1,3,5-Trimethylbenzene	10.815	1	0.51	9.83166		110	70 - 130	8.53	20	
1,3-Butadiene	3.871	0.55	0.39	4.42454		87.5	70 - 130	3.92	20	
1,3-Dichlorobenzene	12.987	2	0.56	12.0246		108	70 - 130	8.19	20	
1,4-Dichlorobenzene	12.987	2	0.51	12.0246		108	70 - 130	11.8	20	
1,4-Dioxane	7.135	0.90	0.65	7.20695		99.0	70 - 130	4.65	20	
2,2,4-Trimethylpentane	8.783	1	0.35	9.34388		94.0	70 - 130	1.61	20	
2-Butanone	5.249	0.74	0.24	5.89824		89.0	70 - 130	4.60	20	
2-Chloroethyl vinyl ether	8.498	1	0.22	8.71583		97.5	70 - 130	0.00	20	
2-Chlorotoluene	10.510	1	0.50	10.3544		101	70 - 130	3.00	20	
2-Hexanone	8.029	1	0.43	8.19296		98.0	70 - 130	5.24	20	
2-Propanol	4.276	0.61	0.26	4.91534		87.0	70 - 130	2.83	20	
4-Chlorotoluene	17.188	1	0.47	10.3544		166	70 - 130	1.82	20	L5
4-Ethyl Toluene	10.913	1	0.47	9.83166		111	70 - 130	12.4	20	
4-Methyl-2-pentanone	7.169	1	0.30	8.19296		87.5	70 - 130	0.573	20	
Acetone	4.086	0.59	0.26	4.75084		86.0	70 - 130	8.89	20	
Acetonitrile	2.905	0.42	0.14	3.35804		86.5	70 - 130	7.78	20	
Acrolein	3.806	0.57	0.22	4.58593		83.0	70 - 130	3.06	20	
Acrylonitrile	3.451	0.54	0.18	4.34053		79.5	70 - 130	4.50	20	
Benzene	5.207	0.80	0.28	6.38953		81.5	70 - 130	0.00	20	
Benzyl chloride	12.632	1	0.37	10.3544		122	70 - 130	10.3	20	
Bromobenzene	20.356	2	0.59	12.8432		158	70 - 130	3.21	20	L5
Bromodichloromethane	13.133	2	0.70	13.4011		98.0	70 - 130	1.54	20	
Bromoform	23.464	3	0.90	20.6733		114	70 - 130	11.7	20	
Bromomethane	6.679	0.97	0.46	7.76597		86.0	70 - 130	4.55	20	
Carbon disulfide	5.232	0.78	0.31	6.22847		84.0	70 - 130	1.20	20	
Carbon tetrachloride	12.708	2	0.43	12.5826		101	70 - 130	0.494	20	
Chlorobenzene	9.667	1	0.41	9.20712		105	70 - 130	11.1	20	
Chloroethane	4.327	0.66	0.28	5.27722		82.0	70 - 130	9.30	20	
Chloroform	8.740	1	0.50	9.76499		89.5	70 - 130	0.00	20	
Chloromethane	3.407	0.52	0.22	4.12982		82.5	70 - 130	2.40	20	
cis-1,2-Dichloroethene	6.304	0.99	0.28	7.92990		79.5	70 - 130	0.00	20	
cis-1,3-Dichloropropene	7.534	1	0.33	9.07724		83.0	70 - 130	1.79	20	

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0222 - No_Prep_AIR (continued)										
LCS Dup (B6L0222-BSD1) - Continued					Prepared: 12/5/2016 Analyzed: 12/5/2016					
Cyclohexane	5.989	0.86	0.25	6.88425		87.0	70 - 130	0.573	20	
Dibromochloromethane	18.570	2	0.83	17.0371		109	70 - 130	1.39	20	
Dibromomethane	17.561	2	0.55	14.2196		124	70 - 130	2.46	20	
Dichlorodifluoromethane	9.495	1	0.56	9.89063		96.0	70 - 130	1.05	20	
Dichlorotetrafluoroethane	13.841	2	0.76	13.9812		99.0	70 - 130	3.96	20	
Ethanol	3.222	0.47	0.20	3.76834		85.5	70 - 130	4.01	20	
Ethylbenzene	9.075	1	0.35	8.68425		104	70 - 130	13.3	20	
Freon-113	13.258	2	0.58	15.3272		86.5	70 - 130	1.72	20	
Hexachlorobutadiene	53.645	3	1	21.3300		252	70 - 130	2.62	20	L5
Isopropylbenzene	10.618	1	0.52	9.83166		108	70 - 130	11.2	20	
m,p-Xylene	38.732	4	1	34.7370		112	70 - 130	11.6	20	
Methylene chloride	5.975	0.87	0.31	6.94740		86.0	70 - 130	0.00	20	
MTBE	6.057	0.90	0.33	7.21047		84.0	70 - 130	2.41	20	
n-Butylbenzene	12.351	1	0.42	10.9790		112	70 - 130	8.33	20	
n-Propylbenzene	10.667	1	0.41	9.83166		108	70 - 130	10.2	20	
Naphthalene	11.218	1	0.36	10.4843		107	70 - 130	15.1	20	
o-Xylene	9.683	1	0.40	8.68425		112	70 - 130	10.9	20	
p-Isopropyltoluene	20.915	1	0.51	10.9790		190	70 - 130	3.74	20	L5
sec-Butylbenzene	12.187	1	0.56	10.9790		111	70 - 130	9.43	20	
Styrene	8.647	1	0.44	8.51934		102	70 - 130	12.6	20	
tert-Butylbenzene	12.791	1	0.62	10.9790		116	70 - 130	10.4	20	
Tetrachloroethene	12.887	2	0.47	13.5650		95.0	70 - 130	5.41	20	
Toluene	6.482	0.94	0.28	7.53688		86.0	70 - 130	4.76	20	
trans-1,2-Dichloroethene	6.225	0.99	0.34	7.92990		78.5	70 - 130	3.24	20	
trans-1,3-Dichloropropene	8.306	1	0.34	9.07722		91.5	70 - 130	2.21	20	
Trichloroethene	9.350	1	0.47	10.7474		87.0	70 - 130	0.573	20	
Trichlorofluoromethane	10.787	1	0.53	11.2366		96.0	70 - 130	3.08	20	
Vinyl acetate	6.831	0.88	0.38	7.04204		97.0	70 - 130	4.21	20	
Vinyl chloride	4.192	0.64	0.21	5.11231		82.0	70 - 130	1.21	20	
Surrogate: 4-Bromofluorobenzene	*21.26*			*17.8935*		*119*	*79.2 - 147*			

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Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0286 - No_Prep_AIR										
Blank (B6L0286-BLK1)					Prepared: 12/6/2016 Analyzed: 12/6/2016					
1,1,1,2-Tetrachloroethane	ND	2	0.57							
1,1,1-Trichloroethane	ND	1	0.58							
1,1,2,2-Tetrachloroethane	ND	2	0.77							
1,1,2-Trichloroethane	ND	1	0.45							
1,1-Dichloroethane	ND	1	0.37							
1,1-Dichloroethene	ND	0.99	0.34							
1,1-Dichloropropene	ND	1	0.37							
1,2,3-Trichloropropane	ND	2	0.58							
1,2,4-Trichlorobenzene	ND	2	0.73							
1,2,4-Trimethylbenzene	ND	1	0.54							
1,2-Dibromo-3-chloropropane	ND	2	1							
1,2-Dibromoethane	ND	2	0.73							
1,2-Dichlorobenzene	ND	2	0.54							
1,2-Dichloroethane	ND	1	0.34							
1,2-Dichloropropane	ND	1	0.41							
1,3,5-Trimethylbenzene	ND	1	0.51							
1,3-Butadiene	ND	0.55	0.39							
1,3-Dichlorobenzene	ND	2	0.56							
1,4-Dichlorobenzene	ND	2	0.51							
1,4-Dioxane	ND	0.90	0.65							
2,2,4-Trimethylpentane	ND	1	0.35							
2-Butanone	ND	0.74	0.24							
2-Chloroethyl vinyl ether	ND	1	0.22							
2-Chlorotoluene	ND	1	0.50							
2-Hexanone	ND	1	0.43							
2-Propanol	ND	0.61	0.26							
4-Chlorotoluene	ND	1	0.47							
4-Ethyl Toluene	ND	1	0.47							
4-Methyl-2-pentanone	ND	1	0.30							
Acetone	ND	0.59	0.26							
Acetonitrile	ND	0.42	0.14							
Acrolein	ND	0.57	0.22							
Acrylonitrile	ND	0.54	0.18							
Benzene	ND	0.80	0.28							
Benzyl chloride	ND	1	0.37							
Bromobenzene	ND	2	0.59							
Bromodichloromethane	ND	2	0.70							
Bromoform	ND	3	0.90							
Bromomethane	ND	0.97	0.46							
Carbon disulfide	ND	0.78	0.31							
Carbon tetrachloride	ND	2	0.43							

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0286 - No_Prep_AIR (continued)										
Blank (B6L0286-BLK1) - Continued					Prepared: 12/6/2016 Analyzed: 12/6/2016					
Chlorobenzene	ND	1	0.41							
Chloroethane	ND	0.66	0.28							
Chloroform	ND	1	0.50							
Chloromethane	ND	0.52	0.22							
cis-1,2-Dichloroethene	ND	0.99	0.28							
cis-1,3-Dichloropropene	ND	1	0.33							
Cyclohexane	ND	0.86	0.25							
Dibromochloromethane	ND	2	0.83							
Dibromomethane	ND	2	0.55							
Dichlorodifluoromethane	ND	1	0.56							
Dichlorotetrafluoroethane	ND	2	0.76							
Ethanol	ND	0.47	0.20							
Ethylbenzene	ND	1	0.35							
Freon-113	ND	2	0.58							
Hexachlorobutadiene	ND	3	1							
Isopropylbenzene	ND	1	0.52							
m,p-Xylene	ND	4	1							
Methylene chloride	ND	0.87	0.31							
MTBE	ND	0.90	0.33							
n-Butylbenzene	ND	1	0.42							
n-Propylbenzene	ND	1	0.41							
Naphthalene	ND	1	0.36							
o-Xylene	ND	1	0.40							
p-Isopropyltoluene	ND	1	0.51							
sec-Butylbenzene	ND	1	0.56							
Styrene	ND	1	0.44							
tert-Butylbenzene	ND	1	0.62							
Tetrachloroethene	ND	2	0.47							
Toluene	ND	0.94	0.28							
trans-1,2-Dichloroethene	ND	0.99	0.34							
trans-1,3-Dichloropropene	ND	1	0.34							
Trichloroethene	ND	1	0.47							
Trichlorofluoromethane	ND	1	0.53							
Vinyl acetate	ND	0.88	0.38							
Vinyl chloride	ND	0.64	0.21							
Surrogate: 4-Bromofluorobenzene	*19.54*			*17.8935*		*109*	*79.2 - 147*			
LCS (B6L0286-BS1)					Prepared: 12/6/2016 Analyzed: 12/6/2016					
1,1,1,2-Tetrachloroethane	12.700	2	0.57	13.7299		92.5	70 - 130			
1,1,1-Trichloroethane	10.367	1	0.58	10.9123		95.0	70 - 130			
1,1,2,2-Tetrachloroethane	14.279	2	0.77	13.7299		104	70 - 130			

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Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0286 - No_Prep_AIR (continued)										
LCS (B6L0286-BS1) - Continued					Prepared: 12/6/2016 Analyzed: 12/6/2016					
1,1,2-Trichloroethane	9.330	1	0.45	10.9123		85.5	70 - 130			
1,1-Dichloroethane	7.245	1	0.37	8.09480		89.5	70 - 130			
1,1-Dichloroethene	6.463	0.99	0.34	7.92990		81.5	70 - 130			
1,1-Dichloropropene	9.259	1	0.37	9.07722		102	70 - 130			
1,2,3-Trichloropropane	22.069	2	0.58	12.0597		183	70 - 130			L5
1,2,4-Trichlorobenzene	32.875	2	0.73	14.8422		222	70 - 130			L5
1,2,4-Trimethylbenzene	10.372	1	0.54	9.83166		106	70 - 130			
1,2-Dibromo-3-chloropropane	41.370	2	1	19.3319		214	70 - 130			L5
1,2-Dibromoethane	13.446	2	0.73	15.3670		87.5	70 - 130			
1,2-Dichlorobenzene	11.183	2	0.54	12.0246		93.0	70 - 130			
1,2-Dichloroethane	8.783	1	0.34	8.09480		108	70 - 130			
1,2-Dichloropropane	8.457	1	0.41	9.24213		91.5	70 - 130			
1,3,5-Trimethylbenzene	10.323	1	0.51	9.83166		105	70 - 130			
1,3-Butadiene	4.225	0.55	0.39	4.42454		95.5	70 - 130			
1,3-Dichlorobenzene	11.784	2	0.56	12.0246		98.0	70 - 130			
1,4-Dichlorobenzene	11.604	2	0.51	12.0246		96.5	70 - 130			
1,4-Dioxane	7.315	0.90	0.65	7.20695		102	70 - 130			
2,2,4-Trimethylpentane	9.344	1	0.35	9.34388		100	70 - 130			
2-Butanone	5.485	0.74	0.24	5.89824		93.0	70 - 130			
2-Chloroethyl vinyl ether	9.239	1	0.22	8.71583		106	70 - 130			
2-Chlorotoluene	10.613	1	0.50	10.3544		102	70 - 130			
2-Hexanone	7.660	1	0.43	8.19296		93.5	70 - 130			
2-Propanol	5.186	0.61	0.26	4.91534		106	70 - 130			
4-Chlorotoluene	16.774	1	0.47	10.3544		162	70 - 130			L5
4-Ethyl Toluene	9.832	1	0.47	9.83166		100	70 - 130			
4-Methyl-2-pentanone	8.439	1	0.30	8.19296		103	70 - 130			
Acetone	4.870	0.59	0.26	4.75084		102	70 - 130			
Acetonitrile	3.241	0.42	0.14	3.35804		96.5	70 - 130			
Acrolein	4.013	0.57	0.22	4.58593		87.5	70 - 130			
Acrylonitrile	3.581	0.54	0.18	4.34053		82.5	70 - 130			
Benzene	5.687	0.80	0.28	6.38953		89.0	70 - 130			
Benzyl chloride	11.338	1	0.37	10.3544		110	70 - 130			
Bromobenzene	19.201	2	0.59	12.8432		150	70 - 130			L5
Bromodichloromethane	13.535	2	0.70	13.4011		101	70 - 130			
Bromoform	20.983	3	0.90	20.6733		102	70 - 130			
Bromomethane	6.989	0.97	0.46	7.76597		90.0	70 - 130			
Carbon disulfide	5.356	0.78	0.31	6.22847		86.0	70 - 130			
Carbon tetrachloride	13.023	2	0.43	12.5826		104	70 - 130			
Chlorobenzene	8.931	1	0.41	9.20712		97.0	70 - 130			
Chloroethane	4.776	0.66	0.28	5.27722		90.5	70 - 130			
Chloroform	9.130	1	0.50	9.76499		93.5	70 - 130			
Chloromethane	3.676	0.52	0.22	4.12982		89.0	70 - 130			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0286 - No_Prep_AIR (continued)										
LCS (B6L0286-BS1) - Continued					Prepared: 12/6/2016 Analyzed: 12/6/2016					
cis-1,2-Dichloroethene	6.384	0.99	0.28	7.92990		80.5	70 - 130			
cis-1,3-Dichloropropene	7.670	1	0.33	9.07724		84.5	70 - 130			
Cyclohexane	6.574	0.86	0.25	6.88425		95.5	70 - 130			
Dibromochloromethane	17.378	2	0.83	17.0371		102	70 - 130			
Dibromomethane	16.068	2	0.55	14.2196		113	70 - 130			
Dichlorodifluoromethane	8.803	1	0.56	9.89063		89.0	70 - 130			
Dichlorotetrafluoroethane	14.331	2	0.76	13.9812		102	70 - 130			
Ethanol	3.542	0.47	0.20	3.76834		94.0	70 - 130			
Ethylbenzene	8.337	1	0.35	8.68425		96.0	70 - 130			
Freon-113	13.488	2	0.58	15.3272		88.0	70 - 130			
Hexachlorobutadiene	48.206	3	1	21.3300		226	70 - 130			L5
Isopropylbenzene	9.635	1	0.52	9.83166		98.0	70 - 130			
m,p-Xylene	35.866	4	1	34.7370		103	70 - 130			
Methylene chloride	6.079	0.87	0.31	6.94740		87.5	70 - 130			
MTBE	6.201	0.90	0.33	7.21047		86.0	70 - 130			
n-Butylbenzene	11.473	1	0.42	10.9790		104	70 - 130			
n-Propylbenzene	9.684	1	0.41	9.83166		98.5	70 - 130			
Naphthalene	9.698	1	0.36	10.4843		92.5	70 - 130			
o-Xylene	9.162	1	0.40	8.68425		106	70 - 130			
p-Isopropyltoluene	19.652	1	0.51	10.9790		179	70 - 130			L5
sec-Butylbenzene	11.308	1	0.56	10.9790		103	70 - 130			
Styrene	7.966	1	0.44	8.51934		93.5	70 - 130			
tert-Butylbenzene	11.748	1	0.62	10.9790		107	70 - 130			
Tetrachloroethene	12.751	2	0.47	13.5650		94.0	70 - 130			
Toluene	6.595	0.94	0.28	7.53688		87.5	70 - 130			
trans-1,2-Dichloroethene	6.344	0.99	0.34	7.92990		80.0	70 - 130			
trans-1,3-Dichloropropene	8.760	1	0.34	9.07722		96.5	70 - 130			
Trichloroethene	9.458	1	0.47	10.7474		88.0	70 - 130			
Trichlorofluoromethane	11.574	1	0.53	11.2366		103	70 - 130			
Vinyl acetate	6.901	0.88	0.38	7.04204		98.0	70 - 130			
Vinyl chloride	4.601	0.64	0.21	5.11231		90.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	*18.32*			*17.8935*		*102*	*79.2 - 147*			
LCS Dup (B6L0286-BSD1)					Prepared: 12/6/2016 Analyzed: 12/6/2016					
1,1,1,2-Tetrachloroethane	13.387	2	0.57	13.7299		97.5	70 - 130	5.26	20	
1,1,1-Trichloroethane	10.803	1	0.58	10.9123		99.0	70 - 130	4.12	20	
1,1,2,2-Tetrachloroethane	15.583	2	0.77	13.7299		114	70 - 130	8.74	20	
1,1,2-Trichloroethane	10.367	1	0.45	10.9123		95.0	70 - 130	10.5	20	
1,1-Dichloroethane	7.650	1	0.37	8.09480		94.5	70 - 130	5.43	20	
1,1-Dichloroethene	6.859	0.99	0.34	7.92990		86.5	70 - 130	5.95	20	
1,1-Dichloropropene	8.714	1	0.37	9.07722		96.0	70 - 130	6.06	20	

Hushmand Associates, Inc.
250 Goddard
Irvine , CA 92618

Project Number : Parcel 32 6th St Bridge, 15-003
Report To : Naresh Bellana
Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0286 - No_Prep_AIR (continued)										
LCS Dup (B6L0286-BSD1) - Continued					Prepared: 12/6/2016 Analyzed: 12/6/2016					
1,2,3-Trichloropropane	22.853	2	0.58	12.0597		190	70 - 130	3.49	20	L5
1,2,4-Trichlorobenzene	33.840	2	0.73	14.8422		228	70 - 130	2.89	20	L5
1,2,4-Trimethylbenzene	11.454	1	0.54	9.83166		116	70 - 130	9.91	20	
1,2-Dibromo-3-chloropropane	44.270	2	1	19.3319		229	70 - 130	6.77	20	L5
1,2-Dibromoethane	15.828	2	0.73	15.3670		103	70 - 130	16.3	20	
1,2-Dichlorobenzene	12.926	2	0.54	12.0246		108	70 - 130	14.5	20	
1,2-Dichloroethane	9.066	1	0.34	8.09480		112	70 - 130	3.17	20	
1,2-Dichloropropane	8.688	1	0.41	9.24213		94.0	70 - 130	2.70	20	
1,3,5-Trimethylbenzene	11.208	1	0.51	9.83166		114	70 - 130	8.22	20	
1,3-Butadiene	4.535	0.55	0.39	4.42454		102	70 - 130	7.07	20	
1,3-Dichlorobenzene	13.287	2	0.56	12.0246		110	70 - 130	12.0	20	
1,4-Dichlorobenzene	13.107	2	0.51	12.0246		109	70 - 130	12.2	20	
1,4-Dioxane	7.928	0.90	0.65	7.20695		110	70 - 130	8.04	20	
2,2,4-Trimethylpentane	9.811	1	0.35	9.34388		105	70 - 130	4.88	20	
2-Butanone	5.692	0.74	0.24	5.89824		96.5	70 - 130	3.69	20	
2-Chloroethyl vinyl ether	7.888	1	0.22	8.71583		90.5	70 - 130	15.8	20	
2-Chlorotoluene	11.752	1	0.50	10.3544		114	70 - 130	10.2	20	
2-Hexanone	8.766	1	0.43	8.19296		107	70 - 130	13.5	20	
2-Propanol	5.554	0.61	0.26	4.91534		113	70 - 130	6.86	20	
4-Chlorotoluene	16.878	1	0.47	10.3544		163	70 - 130	0.615	20	L5
4-Ethyl Toluene	10.913	1	0.47	9.83166		111	70 - 130	10.4	20	
4-Methyl-2-pentanone	8.234	1	0.30	8.19296		100	70 - 130	2.46	20	
Acetone	5.083	0.59	0.26	4.75084		107	70 - 130	4.30	20	
Acetonitrile	3.358	0.42	0.14	3.35804		100	70 - 130	3.56	20	
Acrolein	3.394	0.57	0.22	4.58593		74.0	70 - 130	16.7	20	
Acrylonitrile	3.841	0.54	0.18	4.34053		88.5	70 - 130	7.02	20	
Benzene	5.910	0.80	0.28	6.38953		92.5	70 - 130	3.86	20	
Benzyl chloride	12.736	1	0.37	10.3544		123	70 - 130	11.6	20	
Bromobenzene	20.164	2	0.59	12.8432		157	70 - 130	4.89	20	L5
Bromodichloromethane	14.473	2	0.70	13.4011		108	70 - 130	6.70	20	
Bromoform	23.361	3	0.90	20.6733		113	70 - 130	10.7	20	
Bromomethane	7.417	0.97	0.46	7.76597		95.5	70 - 130	5.93	20	
Carbon disulfide	5.637	0.78	0.31	6.22847		90.5	70 - 130	5.10	20	
Carbon tetrachloride	13.463	2	0.43	12.5826		107	70 - 130	3.33	20	
Chlorobenzene	9.760	1	0.41	9.20712		106	70 - 130	8.87	20	
Chloroethane	5.040	0.66	0.28	5.27722		95.5	70 - 130	5.38	20	
Chloroform	9.277	1	0.50	9.76499		95.0	70 - 130	1.59	20	
Chloromethane	3.944	0.52	0.22	4.12982		95.5	70 - 130	7.05	20	
cis-1,2-Dichloroethene	6.701	0.99	0.28	7.92990		84.5	70 - 130	4.85	20	
cis-1,3-Dichloropropene	8.442	1	0.33	9.07724		93.0	70 - 130	9.58	20	
Cyclohexane	7.125	0.86	0.25	6.88425		104	70 - 130	8.04	20	
Dibromochloromethane	18.911	2	0.83	17.0371		111	70 - 130	8.45	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Volatile Organic Compounds in AIR by TO-15 (Canister) - Quality Control (cont'd)

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0286 - No_Prep_AIR (continued)										
LCS Dup (B6L0286-BSD1) - Continued					Prepared: 12/6/2016 Analyzed: 12/6/2016					
Dibromomethane	16.708	2	0.55	14.2196		118	70 - 130	3.90	20	
Dichlorodifluoromethane	11.374	1	0.56	9.89063		115	70 - 130	25.5	20	R
Dichlorotetrafluoroethane	15.239	2	0.76	13.9812		109	70 - 130	6.15	20	
Ethanol	3.881	0.47	0.20	3.76834		103	70 - 130	9.14	20	
Ethylbenzene	9.553	1	0.35	8.68425		110	70 - 130	13.6	20	
Freon-113	13.871	2	0.58	15.3272		90.5	70 - 130	2.80	20	
Hexachlorobutadiene	52.898	3	1	21.3300		248	70 - 130	9.28	20	L5
Isopropylbenzene	10.815	1	0.52	9.83166		110	70 - 130	11.5	20	
m,p-Xylene	39.600	4	1	34.7370		114	70 - 130	9.90	20	
Methylene chloride	6.148	0.87	0.31	6.94740		88.5	70 - 130	1.14	20	
MTBE	6.598	0.90	0.33	7.21047		91.5	70 - 130	6.20	20	
n-Butylbenzene	12.736	1	0.42	10.9790		116	70 - 130	10.4	20	
n-Propylbenzene	10.766	1	0.41	9.83166		110	70 - 130	10.6	20	
Naphthalene	12.109	1	0.36	10.4843		116	70 - 130	22.1	20	R
o-Xylene	9.770	1	0.40	8.68425		112	70 - 130	6.42	20	
p-Isopropyltoluene	20.366	1	0.51	10.9790		185	70 - 130	3.57	20	L5
sec-Butylbenzene	12.516	1	0.56	10.9790		114	70 - 130	10.1	20	
Styrene	8.903	1	0.44	8.51934		104	70 - 130	11.1	20	
tert-Butylbenzene	12.900	1	0.62	10.9790		118	70 - 130	9.35	20	
Tetrachloroethene	14.040	2	0.47	13.5650		104	70 - 130	9.62	20	
Toluene	7.009	0.94	0.28	7.53688		93.0	70 - 130	6.09	20	
trans-1,2-Dichloroethene	6.859	0.99	0.34	7.92990		86.5	70 - 130	7.81	20	
trans-1,3-Dichloropropene	8.623	1	0.34	9.07722		95.0	70 - 130	1.57	20	
Trichloroethene	10.156	1	0.47	10.7474		94.5	70 - 130	7.12	20	
Trichlorofluoromethane	11.686	1	0.53	11.2366		104	70 - 130	0.966	20	
Vinyl acetate	7.676	0.88	0.38	7.04204		109	70 - 130	10.6	20	
Vinyl chloride	4.831	0.64	0.21	5.11231		94.5	70 - 130	4.88	20	
Surrogate: 4-Bromofluorobenzene	*19.83*			*17.8935*		*111*	*79.2 - 147*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Gasoline Range Organics in Air by TO-3 - Quality Control

Analyte	Result (ug/m³)	PQL (ug/m³)	MDL (ug/m³)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6L0202 - No_Prep_AIR										
Blank (B6L0202-BLK1)						Prepared: 12/5/2016 Analyzed: 12/5/2016				
Gasoline Range Organics	ND	100	70							
Surrogate: 4-Bromofluorobenzene	*15.46*			*17.8935*		*86.4*	*70 - 130*			
LCS (B6L0202-BS1)						Prepared: 12/5/2016 Analyzed: 12/5/2016				
Gasoline Range Organics	817.710	100	70	817.996		100	70 - 130			
Surrogate: 4-Bromofluorobenzene	*16.53*			*17.8935*		*92.4*	*70 - 130*			
LCS Dup (B6L0202-BSD1)						Prepared: 12/5/2016 Analyzed: 12/5/2016				
Gasoline Range Organics	791.411	100	70	817.996		96.8	70 - 130	3.27	20	
Surrogate: 4-Bromofluorobenzene	*17.61*			*17.8935*		*98.4*	*70 - 130*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : Parcel 32 6th St Bridge, 15-003
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/26/2018

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
L5	Laboratory Control Sample high biased. Sample result/s was non-detect (ND) for the target analyte; therefore reanalysis was not necessary.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☒ Client ☐ ATL	1. CHILLED	☐	☒	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand
Address:
Tel:
City: State: Zip:
Fax:

SEND REPORT TO:
Attn: Naresh Belana Email:
Company:
Address: 949-777-1275
City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: Parcel 32 6th St. Bridge
Project No.: 15-003
Sampler: Don Terres
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location		Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container #	Container Type	Container Material	Preservative	REMARKS
1	1604331 - 1	VMW-1	10'	11/28	7:01		X						X						5	1	7	3	N/A	
2	- 2	VMW-2	5'		7:19		X						X						5	1	7	3		
3	- 3	VMW-3	15'		7:35		X						X						5	1	7	3		
4	- 4	VMW-3 Dupl.	15'		7:45		X						X						5	1	7	3		
5	- 5	VMW-4	10'		6:35		X						X						5	1	7	3		
6																								
7																								
8																								
9																								
10																								

Encircle or Write Requested Analysis
Encircle Sample Matrix
Container: # | Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister | Material: 1=Glass; 2=Plastic; 3=Metal
Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn ((Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC
☐ Routine
☐ Caltrans
☐ Legal
☐ RWQCB
☐ Level IV

CUSTODY TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Terres — Submitter Print Name
Signature

Relinquished by: (Signature and Printed Name) Don Terres	Date: 11/28/16	Time: 8:42	Received by: (Signature and Printed Name)	Date: 11/28/16	Time: 8:42
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

June 05, 2017

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1702036
Client Reference : 6th St Bridge, LAC-17-001

Enclosed are the results for sample(s) received on May 16, 2017 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1A-1-0.5	1702036-01	Soil	5/15/17 7:28	5/16/17 13:57
1A-1-1.0	1702036-02	Soil	5/15/17 7:28	5/16/17 13:57
1A-1-3.0	1702036-03	Soil	5/15/17 7:32	5/16/17 13:57
1A-1-5.0	1702036-04	Soil	5/15/17 7:32	5/16/17 13:57
1A-2-0.5	1702036-05	Soil	5/15/17 7:47	5/16/17 13:57
1A-2-1.0	1702036-06	Soil	5/15/17 7:47	5/16/17 13:57
1A-2-3.0	1702036-07	Soil	5/15/17 7:52	5/16/17 13:57
1A-2-5.0	1702036-08	Soil	5/15/17 7:52	5/16/17 13:57
1A-3-0.5	1702036-09	Soil	5/15/17 8:00	5/16/17 13:57
1A-3-1.0	1702036-10	Soil	5/15/17 8:00	5/16/17 13:57
1A-3-3.0	1702036-11	Soil	5/15/17 8:02	5/16/17 13:57
1A-3-5.0	1702036-12	Soil	5/15/17 8:02	5/16/17 13:57
1A-4-0.5	1702036-13	Soil	5/15/17 8:15	5/16/17 13:57
1A-4-1.0	1702036-14	Soil	5/15/17 8:15	5/16/17 13:57
1A-4-3.0	1702036-15	Soil	5/15/17 8:19	5/16/17 13:57
1A-4-5.0	1702036-16	Soil	5/15/17 8:19	5/16/17 13:57
1B-1-0.5	1702036-17	Soil	5/15/17 8:32	5/16/17 13:57
1B-1-1.0	1702036-18	Soil	5/15/17 8:32	5/16/17 13:57
1B-1-3.0	1702036-19	Soil	5/15/17 8:37	5/16/17 13:57
1B-1-5.0	1702036-20	Soil	5/15/17 8:37	5/16/17 13:57
2A-1-0.5	1702036-21	Soil	5/15/17 14:08	5/16/17 13:57
2A-1-1.0	1702036-22	Soil	5/15/17 14:08	5/16/17 13:57
2A-1-3.0	1702036-23	Soil	5/15/17 14:13	5/16/17 13:57
2A-1-5.0	1702036-24	Soil	5/15/17 14:13	5/16/17 13:57
2A-2-0.5	1702036-25	Soil	5/15/17 14:34	5/16/17 13:57
2A-2-1.0	1702036-26	Soil	5/15/17 14:34	5/16/17 13:57
2A-2-3.0	1702036-27	Soil	5/15/17 14:38	5/16/17 13:57
2A-2-5.0	1702036-28	Soil	5/15/17 14:38	5/16/17 13:57
5-1-0.5	1702036-29	Soil	5/15/17 9:47	5/16/17 13:57
5-1-1.0	1702036-30	Soil	5/15/17 9:47	5/16/17 13:57
5-1-2.0	1702036-31	Soil	5/15/17 9:47	5/16/17 13:57
5-1-3.0	1702036-32	Soil	5/15/17 9:47	5/16/17 13:57
5-2-0.5	1702036-33	Soil	5/15/17 9:55	5/16/17 13:57
5-2-1.0	1702036-34	Soil	5/15/17 9:55	5/16/17 13:57
5-2-2.0	1702036-35	Soil	5/15/17 9:55	5/16/17 13:57
5-2-3.0	1702036-36	Soil	5/15/17 9:55	5/16/17 13:57
6-1-0.5	1702036-37	Soil	5/15/17 10:07	5/16/17 13:57

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

6-1-1.0	1702036-38	Soil	5/15/17 10:07	5/16/17 13:57
6-1-3.0	1702036-39	Soil	5/15/17 10:25	5/16/17 13:57
6-1-5.0	1702036-40	Soil	5/15/17 10:25	5/16/17 13:57
6-3-0.5	1702036-41	Soil	5/15/17 10:35	5/16/17 13:57
6-3-1.0	1702036-42	Soil	5/15/17 10:35	5/16/17 13:57
6-3-3.0	1702036-43	Soil	5/15/17 10:38	5/16/17 13:57
6-3-5.0	1702036-44	Soil	5/15/17 10:38	5/16/17 13:57
6-4-0.5	1702036-45	Soil	5/15/17 12:07	5/16/17 13:57
6-4-1.0	1702036-46	Soil	5/15/17 12:07	5/16/17 13:57
6-4-3.0	1702036-47	Soil	5/15/17 12:24	5/16/17 13:57
6-4-5.0	1702036-48	Soil	5/15/17 12:24	5/16/17 13:57
6-5-0.5	1702036-49	Soil	5/15/17 12:30	5/16/17 13:57
6-5-1.0	1702036-50	Soil	5/15/17 12:30	5/16/17 13:57
6-5-3.0	1702036-51	Soil	5/15/17 12:33	5/16/17 13:57
6-5-5.0	1702036-52	Soil	5/15/17 12:33	5/16/17 13:57
6-6-1.0	1702036-53	Soil	5/15/17 11:12	5/16/17 13:57
6-6-3.0	1702036-54	Soil	5/15/17 11:12	5/16/17 13:57
6-6-5.0	1702036-55	Soil	5/15/17 11:12	5/16/17 13:57
6-6-7.5	1702036-56	Soil	5/15/17 11:12	5/16/17 13:57
6-7-1.0	1702036-57	Soil	5/15/17 11:19	5/16/17 13:57
6-7-3.0	1702036-58	Soil	5/15/17 11:19	5/16/17 13:57
6-7-5.0	1702036-59	Soil	5/15/17 11:22	5/16/17 13:57
6-7-7.5	1702036-60	Soil	5/15/17 11:22	5/16/17 13:57
6-9-1.0	1702036-61	Soil	5/15/17 10:58	5/16/17 13:57
6-9-3.0	1702036-62	Soil	5/15/17 10:58	5/16/17 13:57
6-9-5.0	1702036-63	Soil	5/15/17 11:00	5/16/17 13:57
6-9-7.5	1702036-64	Soil	5/15/17 11:00	5/16/17 13:57
6-10-1.0	1702036-65	Soil	5/15/17 10:48	5/16/17 13:57
6-10-3.0	1702036-66	Soil	5/15/17 10:48	5/16/17 13:57
6-10-5.0	1702036-67	Soil	5/15/17 10:52	5/16/17 13:57
6-10-7.5	1702036-68	Soil	5/15/17 10:52	5/16/17 13:57
7-2-0.5	1702036-69	Soil	5/15/17 13:45	5/16/17 13:57
7-2-1.0	1702036-70	Soil	5/15/17 13:45	5/16/17 13:57
7-2-3.0	1702036-71	Soil	5/15/17 13:48	5/16/17 13:57
7-2-5.0	1702036-72	Soil	5/15/17 13:48	5/16/17 13:57
7-3-0.5	1702036-73	Soil	5/15/17 13:35	5/16/17 13:57
7-3-1.0	1702036-74	Soil	5/15/17 13:35	5/16/17 13:57
7-3-3.0	1702036-75	Soil	5/15/17 13:38	5/16/17 13:57
7-3-5.0	1702036-76	Soil	5/15/17 13:38	5/16/17 13:57
7-4-0.5	1702036-77	Soil	5/15/17 13:13	5/16/17 13:57
7-4-1.0	1702036-78	Soil	5/15/17 13:13	5/16/17 13:57

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

7-4-3.0	1702036-79	Soil	5/15/17 13:15	5/16/17 13:57
7-4-5.0	1702036-80	Soil	5/15/17 13:15	5/16/17 13:57
6-8-1.0	1702036-81	Soil	5/15/17 11:29	5/16/17 13:57
6-8-3.0	1702036-82	Soil	5/15/17 11:29	5/16/17 13:57
6-8-5.0	1702036-83	Soil	5/15/17 11:33	5/16/17 13:57
6-8-7.5	1702036-84	Soil	5/15/17 11:33	5/16/17 13:57
6-2-0.5	1702036-85	Soil	5/16/17 7:17	5/16/17 13:57
6-2-1.0	1702036-86	Soil	5/16/17 7:17	5/16/17 13:57
6-2-3.0	1702036-87	Soil	5/16/17 7:19	5/16/17 13:57
6-2-5.0	1702036-88	Soil	5/16/17 7:19	5/16/17 13:57
7-1-0.5	1702036-89	Soil	5/16/17 7:42	5/16/17 13:57
7-1-1.0	1702036-90	Soil	5/16/17 7:42	5/16/17 13:57
7-5-0.5	1702036-91	Soil	5/16/17 8:11	5/16/17 13:57
7-5-1.0	1702036-92	Soil	5/16/17 8:11	5/16/17 13:57
7-5-3.0	1702036-93	Soil	5/16/17 8:13	5/16/17 13:57
7-5-5.0	1702036-94	Soil	5/16/17 8:13	5/16/17 13:57
7-6-0.5	1702036-95	Soil	5/16/17 8:34	5/16/17 13:57
7-6-1.0	1702036-96	Soil	5/16/17 8:34	5/16/17 13:57
7-6-3.0	1702036-97	Soil	5/16/17 8:36	5/16/17 13:57
7-6-5.0	1702036-98	Soil	5/16/17 8:36	5/16/17 13:57
7-7-0.5	1702036-99	Soil	5/16/17 8:23	5/16/17 13:57
7-7-1.0	1702036-AA	Soil	5/16/17 8:23	5/16/17 13:57
7-7-3.0	1702036-AB	Soil	5/16/17 8:25	5/16/17 13:57
7-7-5.0	1702036-AC	Soil	5/16/17 8:25	5/16/17 13:57
8-1-0.5	1702036-AD	Soil	5/16/17 9:17	5/16/17 13:57
8-1-1.0	1702036-AE	Soil	5/16/17 9:17	5/16/17 13:57
8-1-3.0	1702036-AF	Soil	5/16/17 9:20	5/16/17 13:57
8-1-5.0	1702036-AG	Soil	5/16/17 9:20	5/16/17 13:57
8-2-0.5	1702036-AH	Soil	5/16/17 9:08	5/16/17 13:57
8-2-1.0	1702036-AI	Soil	5/16/17 9:08	5/16/17 13:57
8-2-3.0	1702036-AJ	Soil	5/16/17 9:11	5/16/17 13:57
8-2-5.0	1702036-AK	Soil	5/16/17 9:11	5/16/17 13:57
8-3-0.5	1702036-AL	Soil	5/16/17 8:52	5/16/17 13:57
8-3-1.0	1702036-AM	Soil	5/16/17 8:52	5/16/17 13:57
8-3-3.0	1702036-AN	Soil	5/16/17 8:55	5/16/17 13:57
8-3-5.0	1702036-AO	Soil	5/16/17 8:55	5/16/17 13:57

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

CASE NARRATIVE

The samples for EPA 8151 (Chlorinated Herbicides) analysis were subcontracted to AETL with ELAP Cert.# 1541.

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-1-0.5

Lab ID: 1702036-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**3.8**	2.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Arsenic	**2.1**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Barium	**200**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Cadmium	**1.9**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Chromium	**17**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Cobalt	**5.6**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Copper	**230**	2.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Lead	**860**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Nickel	**11**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Vanadium	**23**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	
Zinc	**240**	1.0	1	B7E0669	05/20/2017	05/22/17 13:32	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	0.25	5	B7F0002	06/01/2017	06/01/17 13:51	D1
Lead	**3.6**	0.25	5	B7F0002	06/01/2017	06/01/17 13:51	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	1.0	20	B7F0043	06/02/2017	06/02/17 15:35	D1
Lead	**51**	1.0	20	B7F0043	06/02/2017	06/02/17 15:35	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-1-0.5

Lab ID: 1702036-01

Hexavalent Chromium by EPA 7196A/3060A **Analyst: SLO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexavalent Chromium	**2.9**	1.0	1	B7F0053	06/01/2017	06/02/17 11:00	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.91**	0.10	1	B7E0674	05/20/2017	05/22/17 14:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-1-1.0

Lab ID: 1702036-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Arsenic	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Barium	**99**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Chromium	**9.7**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Cobalt	**5.1**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Copper	**46**	2.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Lead	**230**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Nickel	**6.8**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Vanadium	**20**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	
Zinc	**130**	1.0	1	B7E0669	05/20/2017	05/22/17 13:33	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 13:55	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.9**	1.0	20	B7F0043	06/02/2017	06/02/17 15:36	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0674	05/20/2017	05/22/17 14:21	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-1-3.0

Lab ID: 1702036-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**3.3**	2.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Arsenic	**1.3**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Barium	**97**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Chromium	**19**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Cobalt	**4.8**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Copper	**100**	2.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Lead	**440**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Molybdenum	**1.2**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Nickel	**8.4**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Vanadium	**19**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	
Zinc	**170**	1.0	1	B7E0669	05/20/2017	05/22/17 13:34	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.3**	0.25	5	B7F0002	06/01/2017	06/01/17 13:56	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**11**	1.0	20	B7F0043	06/02/2017	06/02/17 15:38	D1

Hexavalent Chromium by EPA 7196A/3060A

Analyst: SLO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexavalent Chromium	ND	1.0	1	B7F0053	06/01/2017	06/02/17 11:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-1-3.0

Lab ID: 1702036-03

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.12**	0.10	1	B7E0674	05/20/2017	05/22/17 14:23	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-1-5.0

Lab ID: 1702036-04

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Arsenic	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Barium	**33**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Chromium	**4.4**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Cobalt	**3.5**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Copper	**4.5**	2.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Lead	**1.1**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Nickel	**2.8**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Vanadium	**14**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	
Zinc	**15**	1.0	1	B7E0669	05/20/2017	05/22/17 13:36	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0674	05/20/2017	05/22/17 14:25	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-2-0.5

Lab ID: 1702036-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Arsenic	**2.3**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Barium	**310**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Chromium	**15**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Cobalt	**6.3**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Copper	**50**	2.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Lead	**310**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Nickel	**11**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Vanadium	**25**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	
Zinc	**480**	1.0	1	B7E0669	05/20/2017	05/22/17 13:37	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 13:58	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**26**	1.0	20	B7F0043	06/02/2017	06/02/17 15:39	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.45**	0.10	1	B7E0674	05/20/2017	05/22/17 14:27	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-2-1.0

Lab ID: 1702036-06

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Arsenic	**1.2**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Barium	**63**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Chromium	**7.9**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Cobalt	**5.5**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Copper	**9.2**	2.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Lead	**15**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Nickel	**5.8**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Vanadium	**22**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	
Zinc	**45**	1.0	1	B7E0669	05/20/2017	05/22/17 13:38	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.20**	0.10	1	B7E0674	05/20/2017	05/22/17 14:29	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-2-3.0

Lab ID: 1702036-07

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Arsenic	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Barium	**39**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Chromium	**4.9**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Cobalt	**3.7**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Copper	**4.2**	2.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Lead	**1.1**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Nickel	**3.1**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Vanadium	**17**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	
Zinc	**16**	1.0	1	B7E0669	05/20/2017	05/22/17 13:39	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0674	05/20/2017	05/22/17 14:31	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-2-5.0

Lab ID: 1702036-08

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Arsenic	**1.7**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Barium	**120**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Chromium	**13**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Cobalt	**9.0**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Copper	**18**	2.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Lead	**3.2**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Nickel	**9.9**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Vanadium	**26**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	
Zinc	**45**	1.0	1	B7E0669	05/20/2017	05/22/17 13:42	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.17**	0.10	1	B7E0674	05/20/2017	05/22/17 14:37	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-3-0.5

Lab ID: 1702036-09

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Arsenic	**2.2**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Barium	**120**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Beryllium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Cadmium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Chromium	**15**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Cobalt	**6.1**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Copper	**48**	2.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Lead	**140**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Molybdenum	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Nickel	**9.2**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Selenium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Silver	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Thallium	ND	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Vanadium	**23**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	
Zinc	**130**	1.0	1	B7E0669	05/20/2017	05/22/17 13:44	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:03	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.9**	1.0	20	B7F0043	06/02/2017	06/02/17 15:40	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.18**	0.10	1	B7E0674	05/20/2017	05/22/17 14:39	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-3-1.0

Lab ID: 1702036-10

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Barium	**130**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Chromium	**11**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Cobalt	**6.5**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Copper	**26**	2.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Lead	**130**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Nickel	**10**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Vanadium	**27**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	
Zinc	**150**	1.0	1	B7E0680	05/20/2017	05/22/17 13:47	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:04	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**7.1**	1.0	20	B7F0043	06/02/2017	06/02/17 15:57	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.20**	0.10	1	B7E0675	05/20/2017	05/22/17 14:45	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-3-3.0

Lab ID: 1702036-11

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Barium	**68**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Chromium	**7.7**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Cobalt	**5.4**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Copper	**6.9**	2.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Lead	**1.5**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Nickel	**5.1**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Vanadium	**20**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	
Zinc	**25**	1.0	1	B7E0680	05/20/2017	05/22/17 13:51	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 14:52	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-3-5.0

Lab ID: 1702036-12

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Barium	**35**	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Chromium	**4.7**	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Cobalt	**3.4**	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Copper	**3.9**	2.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Lead	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Nickel	**3.1**	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Vanadium	**14**	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	
Zinc	**17**	1.0	1	B7E0680	05/20/2017	05/22/17 13:52	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 14:54	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-4-0.5

Lab ID: 1702036-13

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Arsenic	**3.4**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Barium	**100**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Chromium	**15**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Cobalt	**6.8**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Copper	**43**	2.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Lead	**140**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Nickel	**11**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Vanadium	**26**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	
Zinc	**210**	1.0	1	B7E0680	05/20/2017	05/22/17 13:53	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:06	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.1**	1.0	20	B7F0043	06/02/2017	06/02/17 16:21	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.22**	0.10	1	B7E0675	05/20/2017	05/22/17 15:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-4-1.0

Lab ID: 1702036-14

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Barium	**83**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Chromium	**14**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Cobalt	**8.0**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Copper	**16**	2.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Lead	**4.2**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Nickel	**9.0**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Vanadium	**29**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	
Zinc	**39**	1.0	1	B7E0680	05/20/2017	05/22/17 13:56	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-4-3.0

Lab ID: 1702036-15

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Barium	**66**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Chromium	**9.0**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Cobalt	**6.6**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Copper	**11**	2.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Lead	**1.9**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Nickel	**6.3**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Vanadium	**24**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	
Zinc	**29**	1.0	1	B7E0680	05/20/2017	05/22/17 13:58	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1A-4-5.0

Lab ID: 1702036-16

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Barium	**55**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Chromium	**7.7**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Cobalt	**5.7**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Copper	**7.7**	2.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Lead	**1.7**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Nickel	**5.4**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Vanadium	**19**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	
Zinc	**26**	1.0	1	B7E0680	05/20/2017	05/22/17 13:59	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:06	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1B-1-0.5

Lab ID: 1702036-17

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Arsenic	**1.9**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Barium	**86**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Chromium	**13**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Cobalt	**5.2**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Copper	**8.3**	2.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Lead	**6.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Molybdenum	**4.4**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Nickel	**8.4**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Vanadium	**25**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	
Zinc	**29**	1.0	1	B7E0680	05/20/2017	05/22/17 14:00	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1B-1-1.0

Lab ID: 1702036-18

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Arsenic	**1.9**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Barium	**84**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Chromium	**15**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Cobalt	**7.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Copper	**8.8**	2.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Lead	**4.4**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Molybdenum	**3.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Nickel	**12**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Vanadium	**30**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	
Zinc	**31**	1.0	1	B7E0680	05/20/2017	05/22/17 14:01	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:10	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1B-1-3.0

Lab ID: 1702036-19

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Barium	**50**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Chromium	**6.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Cobalt	**4.0**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Copper	**6.4**	2.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Lead	**4.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Nickel	**3.9**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Vanadium	**18**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	
Zinc	**24**	1.0	1	B7E0680	05/20/2017	05/22/17 14:02	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:12	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 1B-1-5.0

Lab ID: 1702036-20

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Arsenic	**1.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Barium	**69**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Chromium	**8.4**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Cobalt	**5.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Copper	**9.7**	2.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Lead	**19**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Nickel	**6.0**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Vanadium	**21**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	
Zinc	**32**	1.0	1	B7E0680	05/20/2017	05/22/17 14:03	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.19**	0.10	1	B7E0675	05/20/2017	05/22/17 15:14	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-0.5

Lab ID: 1702036-21

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Barium	**160**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Chromium	**8.8**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Cobalt	**4.2**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Copper	**12**	2.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Lead	**7.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Nickel	**9.4**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Vanadium	**19**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	
Zinc	**46**	1.0	1	B7E0680	05/20/2017	05/22/17 14:04	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:16	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Barium	**84**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Chromium	**11**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Cobalt	**7.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Copper	**12**	2.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Lead	**6.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Nickel	**7.8**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Vanadium	**27**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	
Zinc	**36**	1.0	1	B7E0680	05/20/2017	05/22/17 14:06	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:18	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0718	05/22/2017	05/22/17 10:03	
Surrogate: 4-Bromofluorobenzene *98.1 %*		*36 - 125*		B7E0718	05/22/2017	*05/22/17 10:03*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0785	05/23/2017	05/25/17 01:50	
Surrogate: p-Terphenyl *83.9 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 01:50*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
4,4´-DDE	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
4,4´-DDT	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Aldrin	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
alpha-BHC	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
alpha-Chlordane	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
beta-BHC	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Chlordane	ND	8.5	1	B7E0750	05/22/2017	05/23/17 11:57	
delta-BHC	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Dieldrin	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Endosulfan I	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Endosulfan II	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Endosulfan sulfate	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Endrin	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Endrin aldehyde	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Endrin ketone	ND	2.0	1	B7E0750	05/22/2017	05/23/17 11:57	
gamma-BHC	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
gamma-Chlordane	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Heptachlor	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Heptachlor epoxide	ND	1.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Methoxychlor	ND	5.0	1	B7E0750	05/22/2017	05/23/17 11:57	
Toxaphene	ND	50	1	B7E0750	05/22/2017	05/23/17 11:57	
Surrogate: Decachlorobiphenyl	*64.3 %*	*27 - 123*		B7E0750	05/22/2017	*05/23/17 11:57*	
Surrogate: Tetrachloro-m-xylene	*69.7 %*	*26 - 108*		B7E0750	05/22/2017	*05/23/17 11:57*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1221	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1232	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1242	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1248	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1254	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1260	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1262	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Aroclor 1268	ND	16	1	B7E0750	05/22/2017	05/22/17 17:31	
Surrogate: Decachlorobiphenyl	*90.7 %*	*18 - 136*		B7E0750	05/22/2017	*05/22/17 17:31*	
Surrogate: Tetrachloro-m-xylene	*89.9 %*	*30 - 130*		B7E0750	05/22/2017	*05/22/17 17:31*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 15:26	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 15:26	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 15:26	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 15:26	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 15:26	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:26	
Surrogate: 1,2-Dichloroethane-d4	*96.6 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 15:26*	
Surrogate: 4-Bromofluorobenzene	*100 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 15:26*	
Surrogate: Dibromofluoromethane	*98.1 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 15:26*	
Surrogate: Toluene-d8	*102 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 15:26*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
1,2-Dichlorobenzene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
1,3-Dichlorobenzene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
1,4-Dichlorobenzene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2,4,5-Trichlorophenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2,4,6-Trichlorophenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2,4-Dichlorophenol	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
2,4-Dimethylphenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2,4-Dinitrophenol	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
2,4-Dinitrotoluene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2,6-Dinitrotoluene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2-Chloronaphthalene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2-Chlorophenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2-Methylnaphthalene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2-Methylphenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
2-Nitroaniline	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
2-Nitrophenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	660	1	B7E0747	05/22/2017	05/22/17 18:09	
3-Nitroaniline	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Bromophenyl-phenylether	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Chloro-3-methylphenol	ND	660	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Chloroaniline	ND	660	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Chlorophenyl-phenylether	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Methylphenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Nitroaniline	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
4-Nitrophenol	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Acenaphthene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Acenaphthylene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Anthracene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzidine (M)	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzo(a)anthracene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzo(a)pyrene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzo(b)fluoranthene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzo(g,h,i)perylene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzo(k)fluoranthene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzoic acid	ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
Benzyl alcohol	ND	660	1	B7E0747	05/22/2017	05/22/17 18:09	
bis(2-chloroethoxy)methane	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
bis(2-Chloroethyl)ether	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Butylbenzylphthalate	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Chrysene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Di-n-butylphthalate	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Di-n-octylphthalate	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Dibenz(a,h)anthracene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Dibenzofuran	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Diethyl phthalate	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Dimethyl phthalate	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Fluoranthene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Fluorene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Hexachlorobenzene	ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Hexachlorobutadiene	ND	660	1	B7E0747	05/22/2017	05/22/17 18:09	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-1.0

Lab ID: 1702036-22

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	660	1	B7E0747	05/22/2017	05/22/17 18:09	
Hexachloroethane		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Indeno(1,2,3-cd)pyrene		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Isophorone		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
N-Nitroso-di-n propylamine		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
N-Nitrosodiphenylamine		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Naphthalene		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Nitrobenzene		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Pentachlorophenol		ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
Phenanthrene		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Phenol		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Pyrene		ND	330	1	B7E0747	05/22/2017	05/22/17 18:09	
Pyridine		ND	1600	1	B7E0747	05/22/2017	05/22/17 18:09	
Surrogate: 1,2-Dichlorobenzene-d4	*60.7 %*		*38 - 93*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: 2,4,6-Tribromophenol	*64.7 %*		*27 - 124*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: 2-Chlorophenol-d4	*67.3 %*		*36 - 96*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: 2-Fluorobiphenyl	*71.8 %*		*44 - 100*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: 2-Fluorophenol	*64.9 %*		*32 - 89*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: 4-Terphenyl-d14	*76.8 %*		*49 - 123*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: Nitrobenzene-d5	*69.4 %*		*38 - 104*		B7E0747	05/22/2017	*05/22/17 18:09*	
Surrogate: Phenol-d5	*64.7 %*		*35 - 95*		B7E0747	05/22/2017	*05/22/17 18:09*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-3.0

Lab ID: 1702036-23

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Barium	**42**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Chromium	**5.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Cobalt	**4.1**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Copper	**5.7**	2.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Lead	**5.8**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Nickel	**3.7**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Vanadium	**15**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	
Zinc	**23**	1.0	1	B7E0680	05/20/2017	05/22/17 14:07	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:24	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0718	05/22/2017	05/22/17 10:21	
Surrogate: 4-Bromofluorobenzene *105 %*		*36 - 125*		B7E0718	05/22/2017	*05/22/17 10:21*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0785	05/23/2017	05/25/17 02:07	
Surrogate: p-Terphenyl *84.4 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 02:07*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-3.0

Lab ID: 1702036-23

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-3.0

Lab ID: 1702036-23

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 15:45	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 15:45	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 15:45	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 15:45	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 15:45	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 15:45	
Surrogate: 1,2-Dichloroethane-d4	*98.2 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 15:45*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 15:45*	
Surrogate: Dibromofluoromethane	*98.8 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 15:45*	
Surrogate: Toluene-d8	*101 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 15:45*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-3.0

Lab ID: 1702036-23

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 00:54	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-3.0

Lab ID: 1702036-23

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 00:54	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 00:54	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 00:54	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 00:54	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 00:54	
Surrogate: 1,2-Dichlorobenzene-d4	*56.5 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 00:54*	
Surrogate: 2,4,6-Tribromophenol	*68.5 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 00:54*	
Surrogate: 2-Chlorophenol-d4	*57.4 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 00:54*	
Surrogate: 2-Fluorobiphenyl	*68.0 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 00:54*	
Surrogate: 2-Fluorophenol	*54.9 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 00:54*	
Surrogate: 4-Terphenyl-d14	*64.7 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 00:54*	
Surrogate: Nitrobenzene-d5	*62.7 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 00:54*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-3.0

Lab ID: 1702036-23

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*56.6 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 00:54*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-1-5.0

Lab ID: 1702036-24

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Arsenic	**1.0**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Barium	**90**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Chromium	**7.7**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Cobalt	**2.8**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Copper	**5.5**	2.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Lead	**10**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Nickel	**4.8**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Vanadium	**14**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	
Zinc	**14**	1.0	1	B7E0680	05/20/2017	05/22/17 14:10	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:26	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-0.5

Lab ID: 1702036-25

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Arsenic	**1.9**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Barium	**85**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Chromium	**8.8**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Cobalt	**5.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Copper	**18**	2.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Lead	**28**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Nickel	**7.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Vanadium	**22**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	
Zinc	**48**	1.0	1	B7E0680	05/20/2017	05/22/17 14:12	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:28	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Arsenic	**1.4**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Barium	**59**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Chromium	**8.1**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Cobalt	**5.3**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Copper	**8.4**	2.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Lead	**6.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Nickel	**5.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Vanadium	**21**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	
Zinc	**31**	1.0	1	B7E0680	05/20/2017	05/22/17 14:13	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:30	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0721	05/22/2017	05/22/17 17:12	
Surrogate: 4-Bromofluorobenzene	*103 %*		*36 - 125*		B7E0721	05/22/2017	*05/22/17 17:12*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**18**	10	1	B7E0785	05/23/2017	05/25/17 03:30	
Surrogate: p-Terphenyl	*85.6 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 03:30*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 16:52	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 16:52	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 16:52	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 16:52	
Surrogate: Decachlorobiphenyl	*63.1 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 16:52*	
Surrogate: Tetrachloro-m-xylene	*77.9 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 16:52*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 15:45	
Surrogate: Decachlorobiphenyl	*70.0 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 15:45*	
Surrogate: Tetrachloro-m-xylene	*92.8 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 15:45*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:03	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 16:03	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 16:03	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 16:03	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:03	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:03	
Surrogate: 1,2-Dichloroethane-d4	*93.8 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 16:03*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 16:03*	
Surrogate: Dibromofluoromethane	*94.9 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 16:03*	
Surrogate: Toluene-d8	*100 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 16:03*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
1,2-Dichlorobenzene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
1,3-Dichlorobenzene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
1,4-Dichlorobenzene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,4,5-Trichlorophenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,4,6-Trichlorophenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,4-Dichlorophenol	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,4-Dimethylphenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,4-Dinitrophenol	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,4-Dinitrotoluene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2,6-Dinitrotoluene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2-Chloronaphthalene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2-Chlorophenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2-Methylnaphthalene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2-Methylphenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2-Nitroaniline	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
2-Nitrophenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	3300	5	B7E0814	05/24/2017	05/31/17 22:45	D1
3-Nitroaniline	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4,6-Dinitro-2-methyphenol	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Bromophenyl-phenylether	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Chloro-3-methylphenol	ND	3300	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Chloroaniline	ND	3300	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Chlorophenyl-phenylether	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Methylphenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Nitroaniline	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
4-Nitrophenol	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Acenaphthene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Acenaphthylene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Anthracene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzidine (M)	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzo(a)anthracene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzo(a)pyrene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzo(b)fluoranthene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzo(g,h,i)perylene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzo(k)fluoranthene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzoic acid	ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Benzyl alcohol	ND	3300	5	B7E0814	05/24/2017	05/31/17 22:45	D1
bis(2-chloroethoxy)methane	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
bis(2-Chloroethyl)ether	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
bis(2-chloroisopropyl)ether	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
bis(2-ethylhexyl)phthalate	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Butylbenzylphthalate	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Chrysene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Di-n-butylphthalate	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Di-n-octylphthalate	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Dibenz(a,h)anthracene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Dibenzofuran	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Diethyl phthalate	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Dimethyl phthalate	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Fluoranthene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Fluorene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Hexachlorobenzene	ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Hexachlorobutadiene	ND	3300	5	B7E0814	05/24/2017	05/31/17 22:45	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-1.0

Lab ID: 1702036-26

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	3300	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Hexachloroethane		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Indeno(1,2,3-cd)pyrene		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Isophorone		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
N-Nitroso-di-n propylamine		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
N-Nitrosodiphenylamine		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Naphthalene		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Nitrobenzene		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Pentachlorophenol		ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Phenanthrene		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Phenol		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Pyrene		ND	1600	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Pyridine		ND	8200	5	B7E0814	05/24/2017	05/31/17 22:45	D1
Surrogate: 1,2-Dichlorobenzene-d4	*48.8 %*		*38 - 93*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: 2,4,6-Tribromophenol	*39.7 %*		*27 - 124*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: 2-Chlorophenol-d4	*45.5 %*		*36 - 96*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: 2-Fluorobiphenyl	*59.5 %*		*44 - 100*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: 2-Fluorophenol	*41.9 %*		*32 - 89*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: 4-Terphenyl-d14	*58.9 %*		*49 - 123*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: Nitrobenzene-d5	*53.1 %*		*38 - 104*		B7E0814	05/24/2017	*05/31/17 22:45*	
Surrogate: Phenol-d5	*45.9 %*		*35 - 95*		B7E0814	05/24/2017	*05/31/17 22:45*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-3.0

Lab ID: 1702036-27

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Barium	**49**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Chromium	**6.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Cobalt	**4.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Copper	**6.7**	2.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Lead	**2.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Nickel	**4.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Vanadium	**18**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	
Zinc	**23**	1.0	1	B7E0680	05/20/2017	05/22/17 14:14	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:32	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-5.0

Lab ID: 1702036-28

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Arsenic	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Barium	**58**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Chromium	**8.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Cobalt	**5.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Copper	**6.9**	2.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Lead	**1.2**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Nickel	**5.1**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Vanadium	**22**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	
Zinc	**22**	1.0	1	B7E0680	05/20/2017	05/22/17 14:15	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:34	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0721	05/22/2017	05/22/17 17:30	
Surrogate: 4-Bromofluorobenzene	*102 %*		*36 - 125*		B7E0721	05/22/2017	*05/22/17 17:30*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/24/17 23:35	
Surrogate: p-Terphenyl	*80.4 %*		*47 - 157*		B7E0785	05/23/2017	*05/24/17 23:35*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-5.0

Lab ID: 1702036-28

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-5.0

Lab ID: 1702036-28

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:22	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 16:22	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 16:22	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 16:22	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:22	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:22	
Surrogate: 1,2-Dichloroethane-d4	*96.0 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 16:22*	
Surrogate: 4-Bromofluorobenzene	*106 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 16:22*	
Surrogate: Dibromofluoromethane	*97.4 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 16:22*	
Surrogate: Toluene-d8	*99.8 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 16:22*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-5.0

Lab ID: 1702036-28

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	05/31/17 21:51	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Anthracene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-5.0

Lab ID: 1702036-28

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	05/31/17 21:51	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Chrysene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Fluorene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	05/31/17 21:51	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	05/31/17 21:51	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Isophorone	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Naphthalene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Phenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Pyrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:51	
Pyridine	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:51	
Surrogate: 1,2-Dichlorobenzene-d4	*54.3 %*	*38 - 93*		B7E0781	05/23/2017	*05/31/17 21:51*	
Surrogate: 2,4,6-Tribromophenol	*64.8 %*	*27 - 124*		B7E0781	05/23/2017	*05/31/17 21:51*	
Surrogate: 2-Chlorophenol-d4	*55.0 %*	*36 - 96*		B7E0781	05/23/2017	*05/31/17 21:51*	
Surrogate: 2-Fluorobiphenyl	*57.1 %*	*44 - 100*		B7E0781	05/23/2017	*05/31/17 21:51*	
Surrogate: 2-Fluorophenol	*51.9 %*	*32 - 89*		B7E0781	05/23/2017	*05/31/17 21:51*	
Surrogate: 4-Terphenyl-d14	*63.3 %*	*49 - 123*		B7E0781	05/23/2017	*05/31/17 21:51*	
Surrogate: Nitrobenzene-d5	*56.4 %*	*38 - 104*		B7E0781	05/23/2017	*05/31/17 21:51*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 2A-2-5.0

Lab ID: 1702036-28

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*54.3 %*	*35 - 95*		B7E0781	05/23/2017	*05/31/17 21:51*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-1-0.5

Lab ID: 1702036-29

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Arsenic	**1.5**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Barium	**72**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Beryllium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Cadmium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Chromium	**7.9**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Cobalt	**5.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Copper	**12**	2.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Lead	**20**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Molybdenum	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Nickel	**6.6**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Selenium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Silver	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Thallium	ND	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Vanadium	**21**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	
Zinc	**46**	1.0	1	B7E0680	05/20/2017	05/22/17 14:16	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0675	05/20/2017	05/22/17 15:36	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-1-1.0

Lab ID: 1702036-30

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Arsenic	**2.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Barium	**84**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Chromium	**10**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Cobalt	**5.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Copper	**19**	2.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Lead	**68**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Nickel	**7.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Vanadium	**22**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	
Zinc	**99**	1.0	1	B7E0681	05/20/2017	05/22/17 14:20	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:07	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.8**	1.0	20	B7F0043	06/02/2017	06/02/17 15:59	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:09	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-1-2.0

Lab ID: 1702036-31

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Arsenic	**4.7**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Barium	**42**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Chromium	**6.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Cobalt	**4.9**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Copper	**23**	2.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Lead	**110**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Nickel	**7.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Vanadium	**18**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	
Zinc	**130**	1.0	1	B7E0681	05/20/2017	05/22/17 14:26	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:11	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.7**	1.0	20	B7F0043	06/02/2017	06/02/17 16:22	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.11**	0.10	1	B7E0676	05/20/2017	05/22/17 15:17	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-1-3.0

Lab ID: 1702036-32

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Barium	**30**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Chromium	**4.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Cobalt	**3.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Copper	**3.8**	2.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Lead	**2.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Nickel	**2.7**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Vanadium	**14**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	
Zinc	**16**	1.0	1	B7E0681	05/20/2017	05/22/17 14:28	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.14**	0.10	1	B7E0676	05/20/2017	05/22/17 15:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-2-0.5

Lab ID: 1702036-33

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Arsenic	**4.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Barium	**75**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Chromium	**15**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Cobalt	**8.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Copper	**20**	2.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Lead	**48**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Nickel	**14**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Vanadium	**29**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	
Zinc	**60**	1.0	1	B7E0681	05/20/2017	05/22/17 14:29	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:21	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-2-1.0

Lab ID: 1702036-34

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Barium	**52**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Chromium	**5.9**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Cobalt	**4.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Copper	**9.6**	2.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Lead	**19**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Nickel	**5.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Vanadium	**18**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	
Zinc	**77**	1.0	1	B7E0681	05/20/2017	05/22/17 14:30	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-2-2.0

Lab ID: 1702036-35

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Barium	**57**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Chromium	**6.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Cobalt	**4.8**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Copper	**5.9**	2.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Lead	**2.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Nickel	**4.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Vanadium	**17**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	
Zinc	**23**	1.0	1	B7E0681	05/20/2017	05/22/17 14:31	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:30	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 5-2-3.0

Lab ID: 1702036-36

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Arsenic	**1.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Barium	**21**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Chromium	**3.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Cobalt	**3.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Copper	**4.3**	2.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Lead	**180**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Nickel	**4.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Vanadium	**8.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	
Zinc	**10**	1.0	1	B7E0681	05/20/2017	05/22/17 14:32	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:13	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0043	06/02/2017	06/02/17 16:02	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.12**	0.10	1	B7E0676	05/20/2017	05/22/17 15:32	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-0.5

Lab ID: 1702036-37

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Arsenic	**1.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Barium	**69**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Chromium	**6.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Cobalt	**3.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Copper	**7.2**	2.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Lead	**11**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Nickel	**4.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Vanadium	**14**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	
Zinc	**28**	1.0	1	B7E0681	05/20/2017	05/22/17 14:33	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.14**	0.10	1	B7E0676	05/20/2017	05/22/17 15:34	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Arsenic	**1.4**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Barium	**77**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Chromium	**6.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Cobalt	**3.7**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Copper	**8.5**	2.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Lead	**13**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Nickel	**6.7**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Vanadium	**15**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	
Zinc	**33**	1.0	1	B7E0681	05/20/2017	05/22/17 14:34	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:36	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0721	05/22/2017	05/22/17 17:49	
Surrogate: 4-Bromofluorobenzene *99.3 %*		*36 - 125*		B7E0721	05/22/2017	*05/22/17 17:49*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0785	05/23/2017	05/25/17 02:40	
Surrogate: p-Terphenyl *82.5 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 02:40*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 17:03	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:03	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 17:03	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 17:03	
Surrogate: Decachlorobiphenyl	*64.4 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 17:03*	
Surrogate: Tetrachloro-m-xylene	*83.7 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 17:03*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 16:04	
Surrogate: Decachlorobiphenyl	*67.0 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 16:04*	
Surrogate: Tetrachloro-m-xylene	*86.2 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 16:04*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:41	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 16:41	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 16:41	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 16:41	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:41	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:41	
Surrogate: 1,2-Dichloroethane-d4	*96.0 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 16:41*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 16:41*	
Surrogate: Dibromofluoromethane	*99.2 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 16:41*	
Surrogate: Toluene-d8	*101 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 16:41*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 01:21	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 01:21	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 01:21	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-1.0

Lab ID: 1702036-38

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	660	1	B7E0781	05/23/2017	06/01/17 01:21	
Hexachloroethane		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Indeno(1,2,3-cd)pyrene		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Isophorone		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
N-Nitroso-di-n propylamine		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
N-Nitrosodiphenylamine		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Naphthalene		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Nitrobenzene		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Pentachlorophenol		ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
Phenanthrene		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Phenol		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Pyrene		ND	330	1	B7E0781	05/23/2017	06/01/17 01:21	
Pyridine		ND	1600	1	B7E0781	05/23/2017	06/01/17 01:21	
Surrogate: 1,2-Dichlorobenzene-d4	*48.2 %*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: 2,4,6-Tribromophenol	*61.8 %*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: 2-Chlorophenol-d4	*48.7 %*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: 2-Fluorobiphenyl	*61.7 %*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: 2-Fluorophenol	*47.5 %*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: 4-Terphenyl-d14	*60.2 %*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: Nitrobenzene-d5	*55.4 %*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 01:21*	
Surrogate: Phenol-d5	*48.2 %*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 01:21*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-3.0

Lab ID: 1702036-39

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Barium	**70**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Chromium	**8.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Cobalt	**6.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Copper	**7.4**	2.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Lead	**3.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Nickel	**6.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Vanadium	**23**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	
Zinc	**32**	1.0	1	B7E0681	05/20/2017	05/22/17 14:35	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-1-5.0

Lab ID: 1702036-40

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Barium	**66**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Chromium	**8.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Cobalt	**6.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Copper	**6.5**	2.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Lead	**1.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Nickel	**5.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Vanadium	**24**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	
Zinc	**28**	1.0	1	B7E0681	05/20/2017	05/22/17 14:39	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:40	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-0.5

Lab ID: 1702036-41

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Barium	**46**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Chromium	**5.8**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Cobalt	**3.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Copper	**5.7**	2.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Lead	**9.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Nickel	**3.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Vanadium	**14**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	
Zinc	**28**	1.0	1	B7E0681	05/20/2017	05/22/17 14:40	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:42	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**8.3**	2.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Arsenic	**11**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Barium	**1900**	10	10	B7E0681	05/20/2017	05/22/17 16:14	D6
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Cadmium	**12**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Chromium	**69**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Cobalt	**9.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Copper	**250**	2.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Lead	**4300**	10	10	B7E0681	05/20/2017	05/22/17 16:14	D6
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Nickel	**31**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Selenium	**1.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Vanadium	**22**	1.0	1	B7E0681	05/20/2017	05/22/17 14:41	
Zinc	**10000**	10	10	B7E0681	05/20/2017	05/22/17 16:14	D6

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Barium	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:14	D1
Cadmium	**0.99**	0.25	5	B7F0002	06/01/2017	06/01/17 14:14	D1
Lead	**7.3**	0.25	5	B7F0002	06/01/2017	06/01/17 14:14	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Barium	**3.2**	1.0	20	B7F0043	06/02/2017	06/02/17 16:04	D1
Cadmium	ND	1.0	20	B7F0043	06/02/2017	06/02/17 16:04	D1
Copper	**33**	1.0	20	B7F0043	06/02/2017	06/02/17 16:04	D1
Lead	**270**	1.0	20	B7F0043	06/02/2017	06/02/17 16:04	D1
Zinc	**1100**	2.5	50	B7F0043	06/02/2017	06/02/17 17:41	D6

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Hexavalent Chromium by EPA 7196A/3060A

Analyst: SLO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexavalent Chromium	**3.0**	1.0	1	B7F0053	06/01/2017	06/02/17 11:00	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.44**	0.10	1	B7E0676	05/20/2017	05/22/17 15:44	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0721	05/22/2017	05/22/17 18:07	
Surrogate: 4-Bromofluorobenzene	*98.7 %*		*36 - 125*		B7E0721	05/22/2017	*05/22/17 18:07*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 02:24	
Surrogate: p-Terphenyl	*83.9 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 02:24*	

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4′-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
4,4′-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
4,4′-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 17:13	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:13	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 17:13	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 17:13	
Surrogate: Decachlorobiphenyl	*38.2 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 17:13*	
Surrogate: Tetrachloro-m-xylene	*49.4 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 17:13*	

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 16:23	
Surrogate: Decachlorobiphenyl	*58.6 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 16:23*	
Surrogate: Tetrachloro-m-xylene	*79.9 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 16:23*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:59	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 16:59	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 16:59	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 16:59	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 16:59	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 16:59	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 16:59*	
Surrogate: 4-Bromofluorobenzene	*108 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 16:59*	
Surrogate: Dibromofluoromethane	*96.9 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 16:59*	
Surrogate: Toluene-d8	*101 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 16:59*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 01:49	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 01:49	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 01:49	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 01:49	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 01:49	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 01:49	
Surrogate: 1,2-Dichlorobenzene-d4	*53.0 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 01:49*	
Surrogate: 2,4,6-Tribromophenol	*64.5 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 01:49*	
Surrogate: 2-Chlorophenol-d4	*54.1 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 01:49*	
Surrogate: 2-Fluorobiphenyl	*64.1 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 01:49*	
Surrogate: 2-Fluorophenol	*51.0 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 01:49*	
Surrogate: 4-Terphenyl-d14	*66.5 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 01:49*	
Surrogate: Nitrobenzene-d5	*58.4 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 01:49*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-1.0

Lab ID: 1702036-42

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*52.3 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 01:49*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-3.0

Lab ID: 1702036-43

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Arsenic	**1.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Barium	**160**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Chromium	**8.7**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Cobalt	**3.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Copper	**21**	2.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Lead	**250**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Nickel	**5.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Vanadium	**11**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	
Zinc	**660**	1.0	1	B7E0681	05/20/2017	05/22/17 14:43	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:16	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0043	06/02/2017	06/02/17 16:05	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:46	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-3-5.0

Lab ID: 1702036-44

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Arsenic	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Barium	**21**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Chromium	**3.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Cobalt	**2.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Copper	**2.4**	2.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Lead	**1.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Nickel	**1.9**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Vanadium	**12**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	
Zinc	**13**	1.0	1	B7E0681	05/20/2017	05/22/17 14:44	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.40**	0.10	1	B7E0676	05/20/2017	05/22/17 15:48	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-0.5

Lab ID: 1702036-45

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Arsenic	**2.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Barium	**95**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Chromium	**6.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Cobalt	**3.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Copper	**13**	2.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Lead	**30**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Nickel	**5.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Vanadium	**15**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	
Zinc	**55**	1.0	1	B7E0681	05/20/2017	05/22/17 14:45	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.17**	0.10	1	B7E0676	05/20/2017	05/22/17 15:54	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Arsenic	**26**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Barium	**71**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Cadmium	**1.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Chromium	**11**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Cobalt	**4.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Copper	**41**	2.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Lead	**94**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Nickel	**8.4**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Vanadium	**19**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	
Zinc	**960**	1.0	1	B7E0681	05/20/2017	05/22/17 14:46	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:17	D1
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:17	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Arsenic	**1.1**	1.0	20	B7F0043	06/02/2017	06/02/17 16:09	D1
Lead	**5.4**	1.0	20	B7F0043	06/02/2017	06/02/17 16:09	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:56	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0657	05/21/2017	05/21/17 14:36	
Surrogate: 4-Bromofluorobenzene *98.1 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 14:36*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0785	05/23/2017	05/25/17 02:57	
Surrogate: p-Terphenyl *81.1 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 02:57*	

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 17:24	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:24	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 17:24	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 17:24	
Surrogate: Decachlorobiphenyl	*73.3 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 17:24*	
Surrogate: Tetrachloro-m-xylene	*87.2 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 17:24*	

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 16:42	
Surrogate: Decachlorobiphenyl	*69.5 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 16:42*	
Surrogate: Tetrachloro-m-xylene	*87.0 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 16:42*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 17:18	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 17:18	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 17:18	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 17:18	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 17:18	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:18	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 17:18*	
Surrogate: 4-Bromofluorobenzene	*97.9 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 17:18*	
Surrogate: Dibromofluoromethane	*98.9 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 17:18*	
Surrogate: Toluene-d8	*98.6 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 17:18*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 02:16	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 02:16	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 02:16	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 02:16	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:16	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:16	
Surrogate: 1,2-Dichlorobenzene-d4	*54.8 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 02:16*	
Surrogate: 2,4,6-Tribromophenol	*68.4 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 02:16*	
Surrogate: 2-Chlorophenol-d4	*55.3 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 02:16*	
Surrogate: 2-Fluorobiphenyl	*65.1 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 02:16*	
Surrogate: 2-Fluorophenol	*52.9 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 02:16*	
Surrogate: 4-Terphenyl-d14	*69.9 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 02:16*	
Surrogate: Nitrobenzene-d5	*60.6 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 02:16*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-1.0

Lab ID: 1702036-46

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*56.3 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 02:16*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-3.0

Lab ID: 1702036-47

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Arsenic	**11**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Barium	**41**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Chromium	**6.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Cobalt	**4.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Copper	**7.1**	2.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Lead	**16**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Nickel	**3.8**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Vanadium	**18**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	
Zinc	**32**	1.0	1	B7E0681	05/20/2017	05/22/17 14:47	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 15:58	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-4-5.0

Lab ID: 1702036-48

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Arsenic	**9.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Barium	**69**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Cadmium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Chromium	**11**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Cobalt	**7.5**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Copper	**11**	2.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Lead	**3.2**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Nickel	**7.0**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Vanadium	**29**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	
Zinc	**59**	1.0	1	B7E0681	05/20/2017	05/22/17 14:48	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0676	05/20/2017	05/22/17 16:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-0.5
Lab ID: 1702036-49

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**4.0**	2.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Arsenic	**9.1**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Barium	**95**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Beryllium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Cadmium	**2.3**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Chromium	**19**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Cobalt	**7.6**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Copper	**82**	2.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Lead	**400**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Molybdenum	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Nickel	**12**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Selenium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Silver	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Thallium	ND	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Vanadium	**21**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	
Zinc	**950**	1.0	1	B7E0681	05/20/2017	05/22/17 14:49	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:18	D1
Lead	ND	0.25	5	B7F0002	06/01/2017	06/01/17 14:18	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	1.0	20	B7F0043	06/02/2017	06/02/17 16:24	D1
Lead	**1.9**	1.0	20	B7F0043	06/02/2017	06/02/17 16:24	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-0.5

Lab ID: 1702036-49

Hexavalent Chromium by EPA 7196A/3060A — **Analyst: SLO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexavalent Chromium	**5.0**	1.0	1	B7F0053	06/01/2017	06/02/17 11:00	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.17**	0.10	1	B7E0676	05/20/2017	05/22/17 16:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-1.0

Lab ID: 1702036-50

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Arsenic	**3.9**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Barium	**75**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Chromium	**10**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Cobalt	**6.7**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Copper	**13**	2.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Lead	**59**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Nickel	**6.9**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Vanadium	**27**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	
Zinc	**83**	1.0	1	B7E0682	05/20/2017	05/22/17 14:55	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.8**	0.25	5	B7F0039	06/02/2017	06/02/17 16:30	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.9**	1.0	20	B7F0043	06/02/2017	06/02/17 16:12	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 15:42	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Arsenic	**1.0**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Barium	**31**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Chromium	**4.5**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Cobalt	**3.2**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Copper	**3.8**	2.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Lead	**2.4**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Nickel	**2.8**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Vanadium	**14**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	
Zinc	**17**	1.0	1	B7E0682	05/20/2017	05/22/17 14:59	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.11**	0.10	1	B7E0677	05/20/2017	05/22/17 16:02	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 14:54	
Surrogate: 4-Bromofluorobenzene	*104 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 14:54*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 01:00	
Surrogate: p-Terphenyl	*84.0 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 01:00*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 17:34	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:34	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 17:34	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 17:34	
Surrogate: Decachlorobiphenyl	*64.8 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 17:34*	
Surrogate: Tetrachloro-m-xylene	*84.3 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 17:34*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 17:00	
Surrogate: Decachlorobiphenyl	*71.6 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 17:00*	
Surrogate: Tetrachloro-m-xylene	*85.6 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 17:00*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 17:37	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 17:37	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 17:37	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 17:37	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 17:37	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:37	
Surrogate: 1,2-Dichloroethane-d4	*96.9 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 17:37*	
Surrogate: 4-Bromofluorobenzene	*99.9 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 17:37*	
Surrogate: Dibromofluoromethane	*96.2 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 17:37*	
Surrogate: Toluene-d8	*99.5 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 17:37*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 02:43	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 02:43	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 02:43	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-3.0

Lab ID: 1702036-51

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	660	1	B7E0781	05/23/2017	06/01/17 02:43	
Hexachloroethane		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Indeno(1,2,3-cd)pyrene		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Isophorone		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
N-Nitroso-di-n propylamine		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
N-Nitrosodiphenylamine		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Naphthalene		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Nitrobenzene		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Pentachlorophenol		ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
Phenanthrene		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Phenol		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Pyrene		ND	330	1	B7E0781	05/23/2017	06/01/17 02:43	
Pyridine		ND	1600	1	B7E0781	05/23/2017	06/01/17 02:43	
Surrogate: 1,2-Dichlorobenzene-d4	*47.4 %*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: 2,4,6-Tribromophenol	*54.5 %*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: 2-Chlorophenol-d4	*47.6 %*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: 2-Fluorobiphenyl	*53.6 %*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: 2-Fluorophenol	*46.7 %*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: 4-Terphenyl-d14	*55.1 %*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: Nitrobenzene-d5	*50.0 %*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 02:43*	
Surrogate: Phenol-d5	*47.8 %*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 02:43*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-5-5.0

Lab ID: 1702036-52

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Barium	**22**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Chromium	**3.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Cobalt	**2.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Copper	**2.5**	2.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Lead	**1.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Nickel	**2.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Vanadium	**9.2**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	
Zinc	**13**	1.0	1	B7E0682	05/20/2017	05/22/17 15:00	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**1.5**	0.10	1	B7E0677	05/20/2017	05/22/17 16:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-6-1.0

Lab ID: 1702036-53

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Arsenic	**1.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Barium	**120**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Chromium	**15**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Cobalt	**8.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Copper	**13**	2.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Lead	**12**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Nickel	**12**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Vanadium	**34**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	
Zinc	**45**	1.0	1	B7E0682	05/20/2017	05/22/17 15:01	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.12**	0.10	1	B7E0677	05/20/2017	05/22/17 16:06	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-6-3.0

Lab ID: 1702036-54

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Barium	**30**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Chromium	**3.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Cobalt	**2.6**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Copper	**3.0**	2.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Lead	**1.2**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Nickel	**2.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Vanadium	**10**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	
Zinc	**13**	1.0	1	B7E0682	05/20/2017	05/22/17 15:02	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-6-5.0

Lab ID: 1702036-55

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Barium	**52**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Chromium	**4.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Cobalt	**3.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Copper	**4.0**	2.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Lead	**1.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Nickel	**3.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Vanadium	**14**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	
Zinc	**14**	1.0	1	B7E0682	05/20/2017	05/22/17 15:03	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:10	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-6-7.5

Lab ID: 1702036-56

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Barium	**32**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Chromium	**7.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Cobalt	**3.8**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Copper	**4.1**	2.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Lead	**1.2**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Nickel	**3.8**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Vanadium	**21**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	
Zinc	**17**	1.0	1	B7E0682	05/20/2017	05/22/17 15:07	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:12	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-7-1.0

Lab ID: 1702036-57

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Barium	**55**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Chromium	**7.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Cobalt	**5.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Copper	**6.1**	2.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Lead	**3.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Nickel	**5.4**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Vanadium	**22**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	
Zinc	**26**	1.0	1	B7E0682	05/20/2017	05/22/17 15:08	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:14	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-7-3.0

Lab ID: 1702036-58

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Barium	**25**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Chromium	**3.7**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Cobalt	**2.7**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Copper	**3.2**	2.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Lead	**2.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Nickel	**2.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Vanadium	**12**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	
Zinc	**14**	1.0	1	B7E0682	05/20/2017	05/22/17 15:09	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.12**	0.10	1	B7E0677	05/20/2017	05/22/17 16:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-7-5.0

Lab ID: 1702036-59

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Barium	**24**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Chromium	**4.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Cobalt	**2.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Copper	**3.6**	2.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Lead	**7.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Nickel	**2.8**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Vanadium	**12**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	
Zinc	**29**	1.0	1	B7E0682	05/20/2017	05/22/17 15:10	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:22	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-7-7.5

Lab ID: 1702036-60

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Barium	**62**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Chromium	**8.6**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Cobalt	**6.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Copper	**7.1**	2.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Lead	**4.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Nickel	**5.6**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Vanadium	**25**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	
Zinc	**33**	1.0	1	B7E0682	05/20/2017	05/22/17 15:12	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-1.0

Lab ID: 1702036-61

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Barium	**79**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Chromium	**10**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Cobalt	**6.4**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Copper	**17**	2.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Lead	**33**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Nickel	**9.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Vanadium	**32**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	
Zinc	**61**	1.0	1	B7E0682	05/20/2017	05/22/17 15:13	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.19**	0.10	1	B7E0677	05/20/2017	05/22/17 16:26	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-1.0

Lab ID: 1702036-61

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 17:55	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 17:55	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-1.0

Lab ID: 1702036-61

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 17:55	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 17:55	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 17:55	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 17:55	
Surrogate: 1,2-Dichloroethane-d4	*94.7 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 17:55*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 17:55*	
Surrogate: Dibromofluoromethane	*97.5 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 17:55*	
Surrogate: Toluene-d8	*109 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 17:55*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-3.0

Lab ID: 1702036-62

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**47**	2.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Arsenic	**9.4**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Barium	**110**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Cadmium	**1.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Chromium	**10**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Cobalt	**4.6**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Copper	**390**	2.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Lead	**3100**	5.0	5	B7E0682	05/20/2017	05/22/17 16:17	D6
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Nickel	**12**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Silver	**1.7**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Vanadium	**18**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	
Zinc	**510**	1.0	1	B7E0682	05/20/2017	05/22/17 15:14	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**6.5**	0.25	5	B7F0039	06/02/2017	06/02/17 16:32	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	20	B7F0044	06/02/2017	06/02/17 13:53	D1
Copper	**31**	1.0	20	B7F0044	06/02/2017	06/02/17 13:53	D1
Lead	**32**	1.0	20	B7F0044	06/02/2017	06/02/17 13:53	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-3.0

Lab ID: 1702036-62

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**1.4**	0.10	1	B7E0677	05/20/2017	05/22/17 16:28	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-3.0

Lab ID: 1702036-62

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 18:14	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 18:14	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 18:14	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 18:14	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Trichloroethene	**7.6**	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 18:14	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-3.0

Lab ID: 1702036-62

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride		ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:14	
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*12 - 186*		B7E0639	05/18/2017	*05/18/17 18:14*	
Surrogate: 4-Bromofluorobenzene	*102 %*		*23 - 162*		B7E0639	05/18/2017	*05/18/17 18:14*	
Surrogate: Dibromofluoromethane	*102 %*		*23 - 179*		B7E0639	05/18/2017	*05/18/17 18:14*	
Surrogate: Toluene-d8	*94.7 %*		*26 - 164*		B7E0639	05/18/2017	*05/18/17 18:14*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-5.0

Lab ID: 1702036-63

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Barium	**81**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Chromium	**8.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Cobalt	**5.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Copper	**41**	2.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Lead	**41**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Nickel	**8.7**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Vanadium	**23**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	
Zinc	**56**	1.0	1	B7E0682	05/20/2017	05/22/17 15:15	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.20**	0.10	1	B7E0677	05/20/2017	05/22/17 16:30	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-9-7.5

Lab ID: 1702036-64

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Barium	**78**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Chromium	**9.9**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Cobalt	**7.7**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Copper	**8.8**	2.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Lead	**3.4**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Nickel	**7.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Vanadium	**29**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	
Zinc	**36**	1.0	1	B7E0682	05/20/2017	05/22/17 15:16	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.20**	0.10	1	B7E0677	05/20/2017	05/22/17 16:32	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-1.0

Lab ID: 1702036-65

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Barium	**110**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Chromium	**11**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Cobalt	**6.8**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Copper	**24**	2.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Lead	**99**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Nickel	**7.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Vanadium	**27**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	
Zinc	**92**	1.0	1	B7E0682	05/20/2017	05/22/17 15:17	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:33	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**14**	1.0	20	B7F0044	06/02/2017	06/02/17 13:54	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.29**	0.10	1	B7E0677	05/20/2017	05/22/17 16:34	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-1.0

Lab ID: 1702036-65

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-1.0

Lab ID: 1702036-65

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 18:33	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 18:33	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 18:33	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 18:33	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Trichloroethene	**7.1**	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 18:33	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:33	
Surrogate: 1,2-Dichloroethane-d4	*102 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 18:33*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 18:33*	
Surrogate: Dibromofluoromethane	*97.2 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 18:33*	
Surrogate: Toluene-d8	*100 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 18:33*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-3.0

Lab ID: 1702036-66

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**5.5**	2.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Arsenic	**6.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Barium	**380**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Cadmium	**1.8**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Chromium	**15**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Cobalt	**3.2**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Copper	**160**	2.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Lead	**800**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Nickel	**9.4**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Vanadium	**14**	1.0	1	B7E0682	05/20/2017	05/22/17 15:21	
Zinc	**2100**	5.0	5	B7E0682	05/20/2017	05/22/17 16:18	D6

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:35	D1
Lead	**410**	1.0	20	B7F0039	06/02/2017	06/05/17 10:52	D6

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	1.0	20	B7F0044	06/02/2017	06/02/17 13:55	D1
Lead	**360**	1.0	20	B7F0044	06/02/2017	06/02/17 13:55	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-3.0

Lab ID: 1702036-66

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.19**	0.10	1	B7E0677	05/20/2017	05/22/17 16:36	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-3.0

Lab ID: 1702036-66

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 18:51	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 18:51	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 18:51	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 18:51	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Trichloroethene	**7.2**	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 18:51	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-3.0

Lab ID: 1702036-66

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride		ND	5.0	1	B7E0639	05/18/2017	05/18/17 18:51	
Surrogate: 1,2-Dichloroethane-d4	*97.6 %*		*12 - 186*		B7E0639	05/18/2017	*05/18/17 18:51*	
Surrogate: 4-Bromofluorobenzene	*103 %*		*23 - 162*		B7E0639	05/18/2017	*05/18/17 18:51*	
Surrogate: Dibromofluoromethane	*101 %*		*23 - 179*		B7E0639	05/18/2017	*05/18/17 18:51*	
Surrogate: Toluene-d8	*99.2 %*		*26 - 164*		B7E0639	05/18/2017	*05/18/17 18:51*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-5.0

Lab ID: 1702036-67

Title 22 Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Arsenic	**8.6**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Barium	**57**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Chromium	**9.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Cobalt	**3.5**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Copper	**37**	2.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Lead	**13**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Nickel	**5.0**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Vanadium	**17**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	
Zinc	**31**	1.0	1	B7E0682	05/20/2017	05/22/17 15:22	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:42	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-10-7.5

Lab ID: 1702036-68

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Barium	**38**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Chromium	**4.8**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Cobalt	**3.6**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Copper	**3.2**	2.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Lead	**1.2**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Nickel	**3.2**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Vanadium	**16**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	
Zinc	**17**	1.0	1	B7E0682	05/20/2017	05/22/17 15:23	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0677	05/20/2017	05/22/17 16:44	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Arsenic	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Barium	**93**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Beryllium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Cadmium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Chromium	**6.1**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Cobalt	**4.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Copper	**8.3**	2.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Lead	**27**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Molybdenum	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Nickel	**4.3**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Selenium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Silver	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Thallium	ND	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Vanadium	**19**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	
Zinc	**57**	1.0	1	B7E0682	05/20/2017	05/22/17 15:25	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.18**	0.10	1	B7E0677	05/20/2017	05/22/17 16:46	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 15:12	
Surrogate: 4-Bromofluorobenzene	*99.1 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 15:12*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 01:17	
Surrogate: p-Terphenyl	*81.8 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 01:17*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 17:45	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:45	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 17:45	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 17:45	
Surrogate: Decachlorobiphenyl	*62.5 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 17:45*	
Surrogate: Tetrachloro-m-xylene	*78.3 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 17:45*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 17:19	
Surrogate: Decachlorobiphenyl	*74.3 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 17:19*	
Surrogate: Tetrachloro-m-xylene	*93.4 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 17:19*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 19:10	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 19:10	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 19:10	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 19:10	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 19:10	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:10	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 19:10*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 19:10*	
Surrogate: Dibromofluoromethane	*90.7 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 19:10*	
Surrogate: Toluene-d8	*102 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 19:10*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 03:10	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 03:10	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 03:10	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-0.5

Lab ID: 1702036-69

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	660	1	B7E0781	05/23/2017	06/01/17 03:10	
Hexachloroethane		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Indeno(1,2,3-cd)pyrene		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Isophorone		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
N-Nitroso-di-n propylamine		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
N-Nitrosodiphenylamine		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Naphthalene		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Nitrobenzene		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Pentachlorophenol		ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
Phenanthrene		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Phenol		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Pyrene		ND	330	1	B7E0781	05/23/2017	06/01/17 03:10	
Pyridine		ND	1600	1	B7E0781	05/23/2017	06/01/17 03:10	
Surrogate: 1,2-Dichlorobenzene-d4	*47.0 %*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: 2,4,6-Tribromophenol	*56.3 %*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: 2-Chlorophenol-d4	*47.5 %*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: 2-Fluorobiphenyl	*55.8 %*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: 2-Fluorophenol	*45.1 %*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: 4-Terphenyl-d14	*58.1 %*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: Nitrobenzene-d5	*53.4 %*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 03:10*	
Surrogate: Phenol-d5	*47.3 %*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 03:10*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-1.0

Lab ID: 1702036-70

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Barium	**35**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Chromium	**4.5**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Cobalt	**3.9**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Copper	**3.1**	2.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Lead	**1.1**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Nickel	**3.2**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Vanadium	**15**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	
Zinc	**17**	1.0	1	B7E0683	05/20/2017	05/22/17 11:52	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-3.0

Lab ID: 1702036-71

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Barium	**23**	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Chromium	**2.9**	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Cobalt	**2.5**	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Copper	**2.1**	2.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Lead	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Nickel	**2.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Vanadium	**11**	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	
Zinc	**13**	1.0	1	B7E0683	05/20/2017	05/22/17 12:01	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.19**	0.10	1	B7E0678	05/20/2017	05/22/17 16:22	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 15:31	
Surrogate: 4-Bromofluorobenzene	*102 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 15:31*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 01:34	
Surrogate: p-Terphenyl	*79.5 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 01:34*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-3.0

Lab ID: 1702036-71

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-3.0

Lab ID: 1702036-71

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 19:28	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 19:28	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 19:28	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 19:28	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 19:28	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:28	
Surrogate: 1,2-Dichloroethane-d4	*102 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 19:28*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 19:28*	
Surrogate: Dibromofluoromethane	*98.9 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 19:28*	
Surrogate: Toluene-d8	*102 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 19:28*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-3.0

Lab ID: 1702036-71

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 03:37	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-3.0

Lab ID: 1702036-71

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 03:37	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 03:37	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 03:37	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 03:37	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 03:37	
Surrogate: 1,2-Dichlorobenzene-d4	*48.4 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 03:37*	
Surrogate: 2,4,6-Tribromophenol	*54.3 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 03:37*	
Surrogate: 2-Chlorophenol-d4	*49.1 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 03:37*	
Surrogate: 2-Fluorobiphenyl	*55.9 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 03:37*	
Surrogate: 2-Fluorophenol	*47.5 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 03:37*	
Surrogate: 4-Terphenyl-d14	*55.3 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 03:37*	
Surrogate: Nitrobenzene-d5	*52.1 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 03:37*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-3.0

Lab ID: 1702036-71

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*47.1 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 03:37*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-2-5.0

Lab ID: 1702036-72

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Barium	**24**	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Chromium	**2.7**	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Cobalt	**2.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Copper	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Lead	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Nickel	**1.9**	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Vanadium	**10**	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	
Zinc	**11**	1.0	1	B7E0683	05/20/2017	05/22/17 12:05	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-0.5

Lab ID: 1702036-73

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Arsenic	**2.5**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Barium	**110**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Chromium	**13**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Cobalt	**7.8**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Copper	**39**	2.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Lead	**51**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Nickel	**11**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Vanadium	**28**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	
Zinc	**93**	1.0	1	B7E0683	05/20/2017	05/22/17 12:08	

STLC Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.5**	1.0	20	B7F0044	06/02/2017	06/02/17 13:57	D1

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.17**	0.10	1	B7E0678	05/20/2017	05/22/17 16:26	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Arsenic	**1.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Barium	**77**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Chromium	**8.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Cobalt	**6.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Copper	**11**	2.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Lead	**33**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Nickel	**5.9**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Vanadium	**26**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	
Zinc	**44**	1.0	1	B7E0683	05/20/2017	05/22/17 12:11	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.11**	0.10	1	B7E0678	05/20/2017	05/22/17 16:28	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 15:49	
Surrogate: 4-Bromofluorobenzene	*106 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 15:49*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 03:14	
Surrogate: p-Terphenyl	*82.5 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 03:14*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
4,4´-DDE [2C]	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 17:55	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 17:55	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 17:55	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 17:55	
Surrogate: Decachlorobiphenyl	*55.8 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 17:55*	
Surrogate: Tetrachloro-m-xylene	*77.4 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 17:55*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 17:37	
Surrogate: Decachlorobiphenyl	*77.1 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 17:37*	
Surrogate: Tetrachloro-m-xylene	*99.5 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 17:37*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 19:47	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 19:47	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 19:47	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 19:47	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 19:47	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 19:47	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 19:47*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 19:47*	
Surrogate: Dibromofluoromethane	*96.9 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 19:47*	
Surrogate: Toluene-d8	*98.0 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 19:47*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
1,2-Dichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
1,3-Dichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
1,4-Dichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,4,5-Trichlorophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,4,6-Trichlorophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,4-Dichlorophenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,4-Dimethylphenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,4-Dinitrophenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,4-Dinitrotoluene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2,6-Dinitrotoluene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2-Chloronaphthalene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2-Chlorophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2-Methylnaphthalene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2-Methylphenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2-Nitroaniline	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
2-Nitrophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	3300	5	B7E0781	05/23/2017	06/01/17 05:52	D1
3-Nitroaniline	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4,6-Dinitro-2-methyphenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Bromophenyl-phenylether	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Chloro-3-methylphenol	ND	3300	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Chloroaniline	ND	3300	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Chlorophenyl-phenylether	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Methylphenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Nitroaniline	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
4-Nitrophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Acenaphthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Acenaphthylene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Anthracene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzidine (M)	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzo(a)anthracene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzo(a)pyrene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzo(b)fluoranthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzo(g,h,i)perylene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzo(k)fluoranthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzoic acid	ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Benzyl alcohol	ND	3300	5	B7E0781	05/23/2017	06/01/17 05:52	D1
bis(2-chloroethoxy)methane	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
bis(2-Chloroethyl)ether	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
bis(2-chloroisopropyl)ether	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
bis(2-ethylhexyl)phthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Butylbenzylphthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Chrysene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Di-n-butylphthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Di-n-octylphthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Dibenz(a,h)anthracene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Dibenzofuran	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Diethyl phthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Dimethyl phthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Fluoranthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Fluorene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Hexachlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Hexachlorobutadiene	ND	3300	5	B7E0781	05/23/2017	06/01/17 05:52	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-1.0

Lab ID: 1702036-74

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	3300	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Hexachloroethane		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Indeno(1,2,3-cd)pyrene		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Isophorone		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
N-Nitroso-di-n propylamine		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
N-Nitrosodiphenylamine		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Naphthalene		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Nitrobenzene		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Pentachlorophenol		ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Phenanthrene		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Phenol		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Pyrene		ND	1600	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Pyridine		ND	8200	5	B7E0781	05/23/2017	06/01/17 05:52	D1
Surrogate: 1,2-Dichlorobenzene-d4	*42.4 %*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: 2,4,6-Tribromophenol	*38.0 %*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: 2-Chlorophenol-d4	*38.8 %*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: 2-Fluorobiphenyl	*49.9 %*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: 2-Fluorophenol	*37.8 %*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: 4-Terphenyl-d14	*49.9 %*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: Nitrobenzene-d5	*40.6 %*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 05:52*	
Surrogate: Phenol-d5	*38.0 %*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 05:52*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-3.0

Lab ID: 1702036-75

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Barium	**61**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Chromium	**7.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Cobalt	**5.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Copper	**6.8**	2.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Lead	**7.0**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Nickel	**4.8**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Vanadium	**23**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	
Zinc	**32**	1.0	1	B7E0683	05/20/2017	05/22/17 12:14	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:30	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-5.0

Lab ID: 1702036-76

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Barium	**34**	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Chromium	**4.6**	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Cobalt	**3.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Copper	**3.1**	2.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Lead	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Nickel	**2.9**	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Vanadium	**18**	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	
Zinc	**15**	1.0	1	B7E0683	05/20/2017	05/22/17 12:24	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:32	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 16:08	
Surrogate: 4-Bromofluorobenzene	*106 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 16:08*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/24/17 23:52	
Surrogate: p-Terphenyl	*70.8 %*		*47 - 157*		B7E0785	05/23/2017	*05/24/17 23:52*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-5.0

Lab ID: 1702036-76

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-5.0

Lab ID: 1702036-76

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 20:06	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 20:06	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 20:06	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 20:06	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 20:06	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:06	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 20:06*	
Surrogate: 4-Bromofluorobenzene	*99.8 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 20:06*	
Surrogate: Dibromofluoromethane	*95.9 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 20:06*	
Surrogate: Toluene-d8	*98.0 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 20:06*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-5.0

Lab ID: 1702036-76

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 04:04	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-5.0

Lab ID: 1702036-76

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 04:04	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 04:04	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 04:04	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:04	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:04	
Surrogate: 1,2-Dichlorobenzene-d4	*44.1 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 04:04*	
Surrogate: 2,4,6-Tribromophenol	*50.5 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 04:04*	
Surrogate: 2-Chlorophenol-d4	*43.7 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 04:04*	
Surrogate: 2-Fluorobiphenyl	*51.1 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 04:04*	
Surrogate: 2-Fluorophenol	*42.3 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 04:04*	
Surrogate: 4-Terphenyl-d14	*57.6 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 04:04*	
Surrogate: Nitrobenzene-d5	*46.9 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 04:04*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-3-5.0

Lab ID: 1702036-76

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*43.4 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 04:04*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-0.5

Lab ID: 1702036-77

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Arsenic	**1.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Barium	**130**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Chromium	**12**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Cobalt	**8.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Copper	**36**	2.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Lead	**70**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Nickel	**9.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Selenium	**1.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Vanadium	**32**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	
Zinc	**150**	1.0	1	B7E0683	05/20/2017	05/22/17 12:27	

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.5**	1.0	20	B7F0044	06/02/2017	06/02/17 13:58	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.11**	0.10	1	B7E0678	05/20/2017	05/22/17 16:34	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0657	05/21/2017	05/21/17 16:26	
Surrogate: 4-Bromofluorobenzene	*105 %*	*36 - 125*		B7E0657	05/21/2017	*05/21/17 16:26*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
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Lab ID: 1702036-77

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**26**	10	1	B7E0785	05/23/2017	05/25/17 03:47	
Surrogate: p-Terphenyl	*92.0 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 03:47*	

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
4,4´-DDE		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
4,4´-DDT		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Aldrin		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
alpha-BHC		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
alpha-Chlordane		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
beta-BHC		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Chlordane		ND	8.5	1	B7E0819	05/24/2017	05/24/17 18:05	
delta-BHC		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Dieldrin		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Endosulfan I		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Endosulfan II		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Endosulfan sulfate		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Endrin		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Endrin aldehyde		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Endrin ketone		ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:05	
gamma-BHC		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
gamma-Chlordane		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Heptachlor		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Heptachlor epoxide		ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Methoxychlor		ND	5.0	1	B7E0819	05/24/2017	05/24/17 18:05	
Toxaphene		ND	50	1	B7E0819	05/24/2017	05/24/17 18:05	
Surrogate: Decachlorobiphenyl	*70.2 %*		*27 - 123*		B7E0819	05/24/2017	*05/24/17 18:05*	
Surrogate: Tetrachloro-m-xylene	*78.4 %*		*26 - 108*		B7E0819	05/24/2017	*05/24/17 18:05*	

Certificate of Analysis

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Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 17:56	
Surrogate: Decachlorobiphenyl	*67.2 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 17:56*	
Surrogate: Tetrachloro-m-xylene	*91.8 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 17:56*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	

Certificate of Analysis

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250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-0.5

Lab ID: 1702036-77

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 20:24	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 20:24	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 20:24	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	

Certificate of Analysis

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Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-0.5

Lab ID: 1702036-77

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 20:24	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 20:24	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:24	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 20:24*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 20:24*	
Surrogate: Dibromofluoromethane	*99.0 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 20:24*	
Surrogate: Toluene-d8	*101 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 20:24*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
1,2-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
1,3-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
1,4-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,4,5-Trichlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,4,6-Trichlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,4-Dichlorophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,4-Dimethylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,4-Dinitrophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,4-Dinitrotoluene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2,6-Dinitrotoluene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2-Chloronaphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2-Chlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2-Methylnaphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2-Methylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
2-Nitrophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1

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Client Sample ID 7-4-0.5

Lab ID: 1702036-77

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
3-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4,6-Dinitro-2-methyphenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Bromophenyl-phenylether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Chloro-3-methylphenol	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Chloroaniline	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Chlorophenyl-phenylether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Methylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
4-Nitrophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Acenaphthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Acenaphthylene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzidine (M)	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzo(a)anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzo(a)pyrene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzo(b)fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzo(g,h,i)perylene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzo(k)fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzoic acid	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Benzyl alcohol	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
bis(2-chloroethoxy)methane	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
bis(2-Chloroethyl)ether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
bis(2-chloroisopropyl)ether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
bis(2-ethylhexyl)phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Butylbenzylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Chrysene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Di-n-butylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Di-n-octylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Dibenz(a,h)anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Dibenzofuran	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Diethyl phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Dimethyl phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Fluorene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Hexachlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Hexachlorobutadiene	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:19	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-0.5

Lab ID: 1702036-77

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	66000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Hexachloroethane		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Indeno(1,2,3-cd)pyrene		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Isophorone		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
N-Nitroso-di-n propylamine		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
N-Nitrosodiphenylamine		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Naphthalene		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Nitrobenzene		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Pentachlorophenol		ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Phenanthrene		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Phenol		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Pyrene		ND	33000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Pyridine		ND	160000	100	B7E0781	05/23/2017	06/01/17 06:19	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: 2-Chlorophenol-d4	*0%*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: 2-Fluorobiphenyl	*0%*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: 2-Fluorophenol	*0%*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: 4-Terphenyl-d14	*0%*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: Nitrobenzene-d5	*0%*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 06:19*	S4
Surrogate: Phenol-d5	*0%*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 06:19*	S4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-1.0

Lab ID: 1702036-78

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Barium	**100**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Chromium	**9.8**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Cobalt	**6.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Copper	**44**	2.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Lead	**43**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Nickel	**9.5**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Selenium	**1.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Vanadium	**26**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	
Zinc	**130**	1.0	1	B7E0683	05/20/2017	05/22/17 12:30	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.12**	0.10	1	B7E0678	05/20/2017	05/22/17 16:36	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-3.0

Lab ID: 1702036-79

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Barium	**92**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Chromium	**11**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Cobalt	**7.6**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Copper	**13**	2.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Lead	**31**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Nickel	**8.4**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Vanadium	**29**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	
Zinc	**80**	1.0	1	B7E0683	05/20/2017	05/22/17 12:34	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.64**	0.10	1	B7E0678	05/20/2017	05/22/17 16:38	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 16:45	
Surrogate: 4-Bromofluorobenzene	*106 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 16:45*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**6300**	50	5	B7E0785	05/23/2017	05/25/17 14:19	
Surrogate: p-Terphenyl	*74.7 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 14:19*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-3.0

Lab ID: 1702036-79

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-3.0

Lab ID: 1702036-79

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 20:43	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 20:43	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 20:43	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 20:43	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 20:43	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 20:43	
Surrogate: 1,2-Dichloroethane-d4	*99.7 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 20:43*	
Surrogate: 4-Bromofluorobenzene	*97.0 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 20:43*	
Surrogate: Dibromofluoromethane	*98.5 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 20:43*	
Surrogate: Toluene-d8	*94.7 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 20:43*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-3.0

Lab ID: 1702036-79

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
1,2-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
1,3-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
1,4-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,4,5-Trichlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,4,6-Trichlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,4-Dichlorophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,4-Dimethylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,4-Dinitrophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,4-Dinitrotoluene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2,6-Dinitrotoluene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2-Chloronaphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2-Chlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2-Methylnaphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2-Methylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
2-Nitrophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
3,3´-Dichlorobenzidine	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
3-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4,6-Dinitro-2-methyphenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Bromophenyl-phenylether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Chloro-3-methylphenol	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Chloroaniline	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Chlorophenyl-phenylether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Methylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
4-Nitrophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Acenaphthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Acenaphthylene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzidine (M)	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzo(a)anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzo(a)pyrene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzo(b)fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzo(g,h,i)perylene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzo(k)fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Benzoic acid	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-3.0

Lab ID: 1702036-79

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
bis(2-chloroethoxy)methane	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
bis(2-Chloroethyl)ether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
bis(2-chloroisopropyl)ether	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
bis(2-ethylhexyl)phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Butylbenzylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Chrysene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Di-n-butylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Di-n-octylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Dibenz(a,h)anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Dibenzofuran	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Diethyl phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Dimethyl phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Fluorene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Hexachlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Hexachlorobutadiene	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Hexachlorocyclopentadiene	ND	66000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Hexachloroethane	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Indeno(1,2,3-cd)pyrene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Isophorone	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
N-Nitroso-di-n propylamine	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
N-Nitrosodiphenylamine	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Naphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Nitrobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Pentachlorophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Phenanthrene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Phenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Pyrene	ND	33000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Pyridine	ND	160000	100	B7E0781	05/23/2017	06/01/17 06:46	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 06:46*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 06:46*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 06:46*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 06:46*	S4
Surrogate: 2-Fluorophenol	*0%*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 06:46*	S4
Surrogate: 4-Terphenyl-d14	*0%*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 06:46*	S4
Surrogate: Nitrobenzene-d5	*0%*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 06:46*	S4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-3.0

Lab ID: 1702036-79

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*0%*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 06:46*	S4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-4-5.0

Lab ID: 1702036-80

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Arsenic	**2.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Barium	**150**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Chromium	**13**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Cobalt	**4.6**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Copper	**35**	2.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Lead	**12**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Nickel	**22**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Vanadium	**23**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	
Zinc	**890**	1.0	1	B7E0683	05/20/2017	05/22/17 12:37	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:45	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-8-1.0

Lab ID: 1702036-81

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Arsenic	**5.0**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Barium	**100**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Chromium	**7.5**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Cobalt	**4.5**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Copper	**97**	2.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Lead	**140**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Nickel	**6.1**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Vanadium	**21**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	
Zinc	**210**	1.0	1	B7E0683	05/20/2017	05/22/17 12:42	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.28**	0.25	5	B7F0039	06/02/2017	06/02/17 16:36	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.6**	1.0	20	B7F0044	06/02/2017	06/02/17 14:00	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.10**	0.10	1	B7E0678	05/20/2017	05/22/17 16:47	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-8-3.0

Lab ID: 1702036-82

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Barium	**25**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Chromium	**3.9**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Cobalt	**2.7**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Copper	**3.0**	2.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Lead	**1.0**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Nickel	**2.4**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Vanadium	**15**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	
Zinc	**13**	1.0	1	B7E0683	05/20/2017	05/22/17 12:45	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:49	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-8-5.0

Lab ID: 1702036-83

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Barium	**47**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Chromium	**6.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Cobalt	**4.8**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Copper	**4.3**	2.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Lead	**1.4**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Nickel	**4.0**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Vanadium	**23**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	
Zinc	**21**	1.0	1	B7E0683	05/20/2017	05/22/17 12:48	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:51	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-8-7.5

Lab ID: 1702036-84

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Barium	**17**	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Chromium	**1.7**	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Cobalt	**1.8**	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Copper	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Lead	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Nickel	**1.3**	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Vanadium	**7.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	
Zinc	**10**	1.0	1	B7E0683	05/20/2017	05/22/17 12:51	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**4.6**	0.50	5	B7E0678	05/20/2017	05/22/17 17:54	

STLC Mercury by AA (Cold Vapor) EPA 7470A

Analyst: KEK

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	1.0	1	B7F0046	06/02/2017	06/02/17 16:02	

TCLP Mercury by AA (Cold Vapor) by EPA 7470A

Analyst: KEK

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	1	B7F0049	06/02/2017	06/02/17 16:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-0.5

Lab ID: 1702036-85

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Arsenic	**2.9**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Barium	**110**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Chromium	**5.5**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Cobalt	**2.7**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Copper	**6.8**	2.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Lead	**90**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Nickel	**3.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Vanadium	**15**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	
Zinc	**62**	1.0	1	B7E0683	05/20/2017	05/22/17 12:54	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:37	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0044	06/02/2017	06/02/17 14:01	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.33**	0.10	1	B7E0678	05/20/2017	05/22/17 16:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-0.5

Lab ID: 1702036-85

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 18:16	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:16	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 18:16	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 18:16	
Surrogate: Decachlorobiphenyl	*32.1 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 18:16*	
Surrogate: Tetrachloro-m-xylene	*33.7 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 18:16*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-0.5

Lab ID: 1702036-85

Polychlorinated Biphenyls by EPA 8082 **Analyst: LT**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1221		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1232		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1242		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1248		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1254		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1260		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1262		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Aroclor 1268		ND	16	1	B7E0819	05/24/2017	05/24/17 18:15	
Surrogate: Decachlorobiphenyl	*42.5 %*		*18 - 136*		B7E0819	05/24/2017	*05/24/17 18:15*	
Surrogate: Tetrachloro-m-xylene	*59.5 %*		*30 - 130*		B7E0819	05/24/2017	*05/24/17 18:15*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-1.0

Lab ID: 1702036-86

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Arsenic	**1.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Barium	**87**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Chromium	**8.2**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Cobalt	**5.7**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Copper	**15**	2.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Lead	**38**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Nickel	**8.0**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Vanadium	**26**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	
Zinc	**89**	1.0	1	B7E0683	05/20/2017	05/22/17 12:58	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.78**	0.10	1	B7E0678	05/20/2017	05/22/17 16:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-3.0

Lab ID: 1702036-87

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Barium	**29**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Chromium	**3.7**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Cobalt	**2.6**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Copper	**2.5**	2.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Lead	**1.2**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Nickel	**2.4**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Vanadium	**11**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	
Zinc	**13**	1.0	1	B7E0683	05/20/2017	05/22/17 13:08	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 16:52	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 17:03	
Surrogate: 4-Bromofluorobenzene	*106 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 17:03*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 00:09	
Surrogate: p-Terphenyl	*82.0 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 00:09*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-3.0

Lab ID: 1702036-87

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-3.0

Lab ID: 1702036-87

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 21:01	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 21:01	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 21:01	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 21:01	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 21:01	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:01	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 21:01*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 21:01*	
Surrogate: Dibromofluoromethane	*100 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 21:01*	
Surrogate: Toluene-d8	*104 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 21:01*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-3.0

Lab ID: 1702036-87

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	05/31/17 21:23	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Anthracene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-3.0

Lab ID: 1702036-87

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	05/31/17 21:23	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Chrysene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Fluorene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	05/31/17 21:23	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	05/31/17 21:23	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Isophorone	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Naphthalene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Phenol	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Pyrene	ND	330	1	B7E0781	05/23/2017	05/31/17 21:23	
Pyridine	ND	1600	1	B7E0781	05/23/2017	05/31/17 21:23	
Surrogate: 1,2-Dichlorobenzene-d4	*57.5 %*	*38 - 93*		B7E0781	05/23/2017	*05/31/17 21:23*	
Surrogate: 2,4,6-Tribromophenol	*69.1 %*	*27 - 124*		B7E0781	05/23/2017	*05/31/17 21:23*	
Surrogate: 2-Chlorophenol-d4	*58.3 %*	*36 - 96*		B7E0781	05/23/2017	*05/31/17 21:23*	
Surrogate: 2-Fluorobiphenyl	*67.2 %*	*44 - 100*		B7E0781	05/23/2017	*05/31/17 21:23*	
Surrogate: 2-Fluorophenol	*55.4 %*	*32 - 89*		B7E0781	05/23/2017	*05/31/17 21:23*	
Surrogate: 4-Terphenyl-d14	*69.7 %*	*49 - 123*		B7E0781	05/23/2017	*05/31/17 21:23*	
Surrogate: Nitrobenzene-d5	*63.5 %*	*38 - 104*		B7E0781	05/23/2017	*05/31/17 21:23*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-3.0

Lab ID: 1702036-87

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*57.6 %*	*35 - 95*		B7E0781	05/23/2017	*05/31/17 21:23*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 6-2-5.0

Lab ID: 1702036-88

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Arsenic	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Barium	**34**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Chromium	**2.9**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Cobalt	**2.8**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Copper	**3.0**	2.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Lead	**1.2**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Nickel	**2.4**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Vanadium	**10**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	
Zinc	**14**	1.0	1	B7E0683	05/20/2017	05/22/17 13:11	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0678	05/20/2017	05/22/17 16:59	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-0.5

Lab ID: 1702036-89

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Arsenic	**2.7**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Barium	**110**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Beryllium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Cadmium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Chromium	**14**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Cobalt	**6.8**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Copper	**4500**	10	5	B7E0683	05/20/2017	05/22/17 18:02	D6
Lead	**45**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Molybdenum	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Nickel	**12**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Selenium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Silver	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Thallium	ND	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Vanadium	**30**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	
Zinc	**100**	1.0	1	B7E0683	05/20/2017	05/22/17 13:13	

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	**12**	1.0	20	B7F0044	06/02/2017	06/02/17 14:03	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.13**	0.10	1	B7E0678	05/20/2017	05/22/17 17:01	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0657	05/21/2017	05/21/17 17:21	
Surrogate: 4-Bromofluorobenzene	*106 %*	*36 - 125*		B7E0657	05/21/2017	*05/21/17 17:21*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-0.5

Lab ID: 1702036-89

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**62**	10	1	B7E0785	05/23/2017	05/25/17 04:04	
Surrogate: p-Terphenyl	*90.2 %*	*47 - 157*		B7E0785	05/23/2017	*05/25/17 04:04*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,1,1-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,1,2-Trichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,1-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,1-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,1-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2,3-Trichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2-Dibromoethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2-Dichloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,3-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,3-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
1,4-Dichlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
2,2-Dichloropropane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
2-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
4-Chlorotoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
4-Isopropyltoluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Benzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Bromobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Bromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Bromodichloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Bromoform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Bromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-0.5

Lab ID: 1702036-89

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Carbon tetrachloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Chlorobenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Chloroethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Chloroform	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Chloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Di-isopropyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Dibromochloromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Dibromomethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Dichlorodifluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Ethyl Acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 21:20	
Ethyl Ether	ND	50	1	B7E0639	05/18/2017	05/18/17 21:20	
Ethyl tert-butyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Ethylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Freon-113	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Hexachlorobutadiene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Isopropylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
m,p-Xylene	ND	10	1	B7E0639	05/18/2017	05/18/17 21:20	
Methylene chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
MTBE	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
n-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
n-Propylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Naphthalene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
o-Xylene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
sec-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Styrene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
tert-Amyl methyl ether	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
tert-Butanol	ND	100	1	B7E0639	05/18/2017	05/18/17 21:20	
tert-Butylbenzene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Tetrachloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Toluene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Trichloroethene	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Trichlorofluoromethane	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-0.5

Lab ID: 1702036-89

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate	ND	50	1	B7E0639	05/18/2017	05/18/17 21:20	
Vinyl chloride	ND	5.0	1	B7E0639	05/18/2017	05/18/17 21:20	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*12 - 186*		B7E0639	05/18/2017	*05/18/17 21:20*	
Surrogate: 4-Bromofluorobenzene	*106 %*	*23 - 162*		B7E0639	05/18/2017	*05/18/17 21:20*	
Surrogate: Dibromofluoromethane	*94.8 %*	*23 - 179*		B7E0639	05/18/2017	*05/18/17 21:20*	
Surrogate: Toluene-d8	*101 %*	*26 - 164*		B7E0639	05/18/2017	*05/18/17 21:20*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
1,2-Dichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
1,3-Dichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
1,4-Dichlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,4,5-Trichlorophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,4,6-Trichlorophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,4-Dichlorophenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,4-Dimethylphenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,4-Dinitrophenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,4-Dinitrotoluene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2,6-Dinitrotoluene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2-Chloronaphthalene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2-Chlorophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2-Methylnaphthalene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2-Methylphenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2-Nitroaniline	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
2-Nitrophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
3,3´-Dichlorobenzidine	ND	3300	5	B7E0781	05/23/2017	06/01/17 07:13	D1
3-Nitroaniline	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4,6-Dinitro-2-methyphenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4-Bromophenyl-phenylether	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4-Chloro-3-methylphenol	ND	3300	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4-Chloroaniline	ND	3300	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4-Chlorophenyl-phenylether	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4-Methylphenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
4-Nitroaniline	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-0.5

Lab ID: 1702036-89

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Nitrophenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Acenaphthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Acenaphthylene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Anthracene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzidine (M)	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzo(a)anthracene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzo(a)pyrene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzo(b)fluoranthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzo(g,h,i)perylene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzo(k)fluoranthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzoic acid	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Benzyl alcohol	ND	3300	5	B7E0781	05/23/2017	06/01/17 07:13	D1
bis(2-chloroethoxy)methane	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
bis(2-Chloroethyl)ether	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
bis(2-chloroisopropyl)ether	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
bis(2-ethylhexyl)phthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Butylbenzylphthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Chrysene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Di-n-butylphthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Di-n-octylphthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Dibenz(a,h)anthracene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Dibenzofuran	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Diethyl phthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Dimethyl phthalate	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Fluoranthene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Fluorene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Hexachlorobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Hexachlorobutadiene	ND	3300	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Hexachlorocyclopentadiene	ND	3300	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Hexachloroethane	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Indeno(1,2,3-cd)pyrene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Isophorone	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
N-Nitroso-di-n propylamine	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
N-Nitrosodiphenylamine	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Naphthalene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Nitrobenzene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Pentachlorophenol	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-0.5

Lab ID: 1702036-89

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Phenanthrene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Phenol	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Pyrene	ND	1600	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Pyridine	ND	8200	5	B7E0781	05/23/2017	06/01/17 07:13	D1
Surrogate: 1,2-Dichlorobenzene-d4	*46.4 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: 2,4,6-Tribromophenol	*43.3 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: 2-Chlorophenol-d4	*44.7 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: 2-Fluorobiphenyl	*55.4 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: 2-Fluorophenol	*39.5 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: 4-Terphenyl-d14	*54.2 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: Nitrobenzene-d5	*50.2 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 07:13*	
Surrogate: Phenol-d5	*41.8 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 07:13*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Arsenic	**1.2**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Barium	**120**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Chromium	**8.8**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Cobalt	**4.8**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Copper	**700**	2.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Lead	**69**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Nickel	**13**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Vanadium	**24**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	
Zinc	**270**	1.0	1	B7E0684	05/20/2017	05/22/17 13:24	

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	**140**	1.0	20	B7F0044	06/02/2017	06/02/17 14:04	D1
Lead	**6.4**	1.0	20	B7F0044	06/02/2017	06/02/17 14:04	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.22**	0.10	1	B7E0678	05/20/2017	05/22/17 17:03	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 17:40	
Surrogate: 4-Bromofluorobenzene	*104 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 17:40*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**120**	10	1	B7E0785	05/23/2017	05/25/17 04:21	
Surrogate: p-Terphenyl	*86.6 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 04:21*	

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD [2C]	**3.4**	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
4,4´-DDE [2C]	**5.9**	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
4,4´-DDT [2C]	**6.1**	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
alpha-BHC [2C]	**2.5**	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
alpha-Chlordane [2C]	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 18:26	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Endrin [2C]	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Endrin aldehyde [2C]	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:26	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 18:26	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 18:26	
Surrogate: Decachlorobiphenyl	*45.0 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 18:26*	
Surrogate: Tetrachloro-m-xylene	*47.3 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 18:26*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 18:33	
Surrogate: Decachlorobiphenyl	*54.8 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 18:33*	
Surrogate: Tetrachloro-m-xylene	*70.3 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 18:33*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 11:04	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 11:04	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 11:04	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 11:04	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 11:04	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:04	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 11:04*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 11:04*	
Surrogate: Dibromofluoromethane	*97.4 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 11:04*	
Surrogate: Toluene-d8	*102 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 11:04*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
1,2-Dichlorobenzene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
1,3-Dichlorobenzene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
1,4-Dichlorobenzene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,4,5-Trichlorophenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,4,6-Trichlorophenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,4-Dichlorophenol	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,4-Dimethylphenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,4-Dinitrophenol	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,4-Dinitrotoluene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2,6-Dinitrotoluene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2-Chloronaphthalene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2-Chlorophenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2-Methylnaphthalene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2-Methylphenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2-Nitroaniline	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
2-Nitrophenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	13000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
3-Nitroaniline	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4,6-Dinitro-2-methyphenol	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Bromophenyl-phenylether	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Chloro-3-methylphenol	ND	13000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Chloroaniline	ND	13000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Chlorophenyl-phenylether	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Methylphenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Nitroaniline	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
4-Nitrophenol	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Acenaphthene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Acenaphthylene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Anthracene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzidine (M)	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzo(a)anthracene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzo(a)pyrene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzo(b)fluoranthene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzo(g,h,i)perylene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzo(k)fluoranthene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzoic acid	ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Benzyl alcohol	ND	13000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
bis(2-chloroethoxy)methane	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
bis(2-Chloroethyl)ether	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
bis(2-chloroisopropyl)ether	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
bis(2-ethylhexyl)phthalate	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Butylbenzylphthalate	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Chrysene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Di-n-butylphthalate	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Di-n-octylphthalate	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Dibenz(a,h)anthracene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Dibenzofuran	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Diethyl phthalate	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Dimethyl phthalate	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Fluoranthene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Fluorene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Hexachlorobenzene	ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Hexachlorobutadiene	ND	13000	20	B7E0781	05/23/2017	06/01/17 07:40	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	13000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Hexachloroethane		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Indeno(1,2,3-cd)pyrene		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Isophorone		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
N-Nitroso-di-n propylamine		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
N-Nitrosodiphenylamine		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Naphthalene		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Nitrobenzene		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Pentachlorophenol		ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Phenanthrene		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Phenol		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Pyrene		ND	6600	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Pyridine		ND	33000	20	B7E0781	05/23/2017	06/01/17 07:40	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: 2-Chlorophenol-d4	*0%*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: 2-Fluorobiphenyl	*0%*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: 2-Fluorophenol	*0%*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: 4-Terphenyl-d14	*0%*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: Nitrobenzene-d5	*0%*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 07:40*	S4
Surrogate: Phenol-d5	*0%*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 07:40*	S4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-0.5

Lab ID: 1702036-91

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Barium	**95**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Chromium	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Cobalt	**8.0**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Copper	**9.7**	2.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Lead	**4.5**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Nickel	**8.3**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Vanadium	**32**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	
Zinc	**39**	1.0	1	B7E0684	05/20/2017	05/22/17 13:33	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Barium	**95**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Chromium	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Cobalt	**8.2**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Copper	**10**	2.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Lead	**3.0**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Nickel	**8.6**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Selenium	**1.0**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Vanadium	**34**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	
Zinc	**38**	1.0	1	B7E0684	05/20/2017	05/22/17 13:36	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:06	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0657	05/21/2017	05/21/17 17:58	
Surrogate: 4-Bromofluorobenzene *105 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 17:58*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0785	05/23/2017	05/25/17 00:26	
Surrogate: p-Terphenyl *88.0 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 00:26*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 18:37	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:37	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 18:37	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 18:37	
Surrogate: Decachlorobiphenyl	*48.3 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 18:37*	
Surrogate: Tetrachloro-m-xylene	*60.8 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 18:37*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 18:52	
Surrogate: Decachlorobiphenyl	*67.4 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 18:52*	
Surrogate: Tetrachloro-m-xylene	*82.1 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 18:52*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 11:24	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 11:24	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 11:24	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 11:24	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 11:24	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:24	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 11:24*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 11:24*	
Surrogate: Dibromofluoromethane	*95.6 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 11:24*	
Surrogate: Toluene-d8	*94.9 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 11:24*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 04:31	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 04:31	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 04:31	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-1.0

Lab ID: 1702036-92

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 04:31	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:31	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:31	
Surrogate: 1,2-Dichlorobenzene-d4	*46.9 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: 2,4,6-Tribromophenol	*54.9 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: 2-Chlorophenol-d4	*49.2 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: 2-Fluorobiphenyl	*56.4 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: 2-Fluorophenol	*47.0 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: 4-Terphenyl-d14	*54.4 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: Nitrobenzene-d5	*53.8 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 04:31*	
Surrogate: Phenol-d5	*48.1 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 04:31*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-3.0

Lab ID: 1702036-93

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Barium	**120**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Chromium	**14**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Cobalt	**9.9**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Copper	**18**	2.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Lead	**3.5**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Nickel	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Selenium	**1.1**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Vanadium	**38**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	
Zinc	**46**	1.0	1	B7E0684	05/20/2017	05/22/17 13:46	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-5.0

Lab ID: 1702036-94

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Barium	**31**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Chromium	**6.7**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Cobalt	**3.6**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Copper	**2.7**	2.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Lead	**1.0**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Nickel	**3.0**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Vanadium	**28**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	
Zinc	**16**	1.0	1	B7E0684	05/20/2017	05/22/17 13:49	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:10	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 18:17	
Surrogate: 4-Bromofluorobenzene	*105 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 18:17*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0785	05/23/2017	05/25/17 00:43	
Surrogate: p-Terphenyl	*78.4 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 00:43*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-5.0

Lab ID: 1702036-94

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-5.0

Lab ID: 1702036-94

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 11:42	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 11:42	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 11:42	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 11:42	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 11:42	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 11:42	
Surrogate: 1,2-Dichloroethane-d4	*102 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 11:42*	
Surrogate: 4-Bromofluorobenzene	*92.8 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 11:42*	
Surrogate: Dibromofluoromethane	*98.8 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 11:42*	
Surrogate: Toluene-d8	*100 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 11:42*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-5.0

Lab ID: 1702036-94

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 04:58	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-5.0

Lab ID: 1702036-94

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 04:58	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 04:58	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 04:58	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 04:58	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 04:58	
Surrogate: 1,2-Dichlorobenzene-d4	*54.2 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 04:58*	
Surrogate: 2,4,6-Tribromophenol	*66.8 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 04:58*	
Surrogate: 2-Chlorophenol-d4	*53.1 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 04:58*	
Surrogate: 2-Fluorobiphenyl	*65.4 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 04:58*	
Surrogate: 2-Fluorophenol	*50.1 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 04:58*	
Surrogate: 4-Terphenyl-d14	*68.9 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 04:58*	
Surrogate: Nitrobenzene-d5	*61.0 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 04:58*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-5-5.0

Lab ID: 1702036-94

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*52.5 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 04:58*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Arsenic	**1.2**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Barium	**91**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Chromium	**8.4**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Cobalt	**5.2**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Copper	**28**	2.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Lead	**31**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Nickel	**7.3**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Vanadium	**23**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	
Zinc	**77**	1.0	1	B7E0684	05/20/2017	05/22/17 13:52	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.13**	0.10	1	B7E0679	05/20/2017	05/22/17 17:12	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0657	05/21/2017	05/21/17 18:35	
Surrogate: 4-Bromofluorobenzene	*103 %*		*36 - 125*		B7E0657	05/21/2017	*05/21/17 18:35*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**200**	10	1	B7E0785	05/23/2017	05/25/17 04:37	
Surrogate: p-Terphenyl	*85.6 %*		*47 - 157*		B7E0785	05/23/2017	*05/25/17 04:37*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD [2C]	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
4,4´-DDE [2C]	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
4,4´-DDT [2C]	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 18:47	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:47	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 18:47	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 18:47	
Surrogate: Decachlorobiphenyl	*34.0 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 18:47*	
Surrogate: Tetrachloro-m-xylene	*42.4 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 18:47*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 19:11	
Surrogate: Decachlorobiphenyl	*46.0 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 19:11*	
Surrogate: Tetrachloro-m-xylene	*63.1 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 19:11*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:01	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 12:01	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 12:01	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 12:01	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:01	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:01	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 12:01*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 12:01*	
Surrogate: Dibromofluoromethane	*94.9 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 12:01*	
Surrogate: Toluene-d8	*97.5 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 12:01*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
1,2-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
1,3-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
1,4-Dichlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,4,5-Trichlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,4,6-Trichlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,4-Dichlorophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,4-Dimethylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,4-Dinitrophenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,4-Dinitrotoluene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2,6-Dinitrotoluene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2-Chloronaphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2-Chlorophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2-Methylnaphthalene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2-Methylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
2-Nitrophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	66000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
3-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4,6-Dinitro-2-methyphenol	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Bromophenyl-phenylether	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Chloro-3-methylphenol	ND	66000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Chloroaniline	ND	66000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Chlorophenyl-phenylether	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Methylphenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Nitroaniline	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
4-Nitrophenol	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Acenaphthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Acenaphthylene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzidine (M)	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzo(a)anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzo(a)pyrene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzo(b)fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzo(g,h,i)perylene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzo(k)fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzoic acid	ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Benzyl alcohol	ND	66000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
bis(2-chloroethoxy)methane	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
bis(2-Chloroethyl)ether	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
bis(2-chloroisopropyl)ether	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
bis(2-ethylhexyl)phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Butylbenzylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Chrysene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Di-n-butylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Di-n-octylphthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Dibenz(a,h)anthracene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Dibenzofuran	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Diethyl phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Dimethyl phthalate	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Fluoranthene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Fluorene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Hexachlorobenzene	ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Hexachlorobutadiene	ND	66000	100	B7E0781	05/23/2017	06/01/17 08:06	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-0.5

Lab ID: 1702036-95

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	66000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Hexachloroethane		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Indeno(1,2,3-cd)pyrene		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Isophorone		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
N-Nitroso-di-n propylamine		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
N-Nitrosodiphenylamine		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Naphthalene		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Nitrobenzene		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Pentachlorophenol		ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Phenanthrene		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Phenol		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Pyrene		ND	33000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Pyridine		ND	160000	100	B7E0781	05/23/2017	06/01/17 08:06	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*		*38 - 93*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*		*27 - 124*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: 2-Chlorophenol-d4	*0%*		*36 - 96*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: 2-Fluorobiphenyl	*0%*		*44 - 100*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: 2-Fluorophenol	*0%*		*32 - 89*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: 4-Terphenyl-d14	*0%*		*49 - 123*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: Nitrobenzene-d5	*0%*		*38 - 104*		B7E0781	05/23/2017	*06/01/17 08:06*	S4
Surrogate: Phenol-d5	*0%*		*35 - 95*		B7E0781	05/23/2017	*06/01/17 08:06*	S4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-1.0

Lab ID: 1702036-96

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Barium	**93**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Chromium	**8.7**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Cobalt	**5.7**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Copper	**28**	2.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Lead	**22**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Nickel	**6.7**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Vanadium	**24**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	
Zinc	**60**	1.0	1	B7E0684	05/20/2017	05/22/17 13:55	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.16**	0.10	1	B7E0679	05/20/2017	05/22/17 17:13	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-3.0

Lab ID: 1702036-97

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Barium	**78**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Chromium	**8.2**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Cobalt	**5.2**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Copper	**12**	2.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Lead	**13**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Nickel	**6.1**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Vanadium	**23**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	
Zinc	**50**	1.0	1	B7E0684	05/20/2017	05/22/17 13:58	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:15	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-5.0

Lab ID: 1702036-98

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Barium	**40**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Chromium	**5.0**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Cobalt	**3.5**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Copper	**4.6**	2.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Lead	**2.7**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Nickel	**3.4**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Vanadium	**16**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	
Zinc	**19**	1.0	1	B7E0684	05/20/2017	05/22/17 14:02	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:17	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0622	05/19/2017	05/19/17 14:32	
Surrogate: 4-Bromofluorobenzene	*103 %*		*36 - 125*		B7E0622	05/19/2017	*05/19/17 14:32*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0786	05/23/2017	05/24/17 19:42	
Surrogate: p-Terphenyl	*80.3 %*		*47 - 157*		B7E0786	05/23/2017	*05/24/17 19:42*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-5.0

Lab ID: 1702036-98

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-5.0

Lab ID: 1702036-98

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:19	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 12:19	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 12:19	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 12:19	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:19	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:19	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 12:19*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 12:19*	
Surrogate: Dibromofluoromethane	*95.6 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 12:19*	
Surrogate: Toluene-d8	*101 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 12:19*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-5.0

Lab ID: 1702036-98

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
1,2-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
1,3-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
1,4-Dichlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2,4,5-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2,4,6-Trichlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2,4-Dichlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
2,4-Dimethylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2,4-Dinitrophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
2,4-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2,6-Dinitrotoluene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2-Chloronaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2-Chlorophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2-Methylnaphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
2-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
2-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
3,3´-Dichlorobenzidine	ND	660	1	B7E0781	05/23/2017	06/01/17 05:25	
3-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Bromophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Chloro-3-methylphenol	ND	660	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Chloroaniline	ND	660	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Chlorophenyl-phenylether	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Methylphenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Nitroaniline	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
4-Nitrophenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Acenaphthene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Acenaphthylene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzidine (M)	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzo(a)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzo(a)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzo(b)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzo(g,h,i)perylene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzo(k)fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Benzoic acid	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-5.0

Lab ID: 1702036-98

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0781	05/23/2017	06/01/17 05:25	
bis(2-chloroethoxy)methane	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
bis(2-Chloroethyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Butylbenzylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Chrysene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Di-n-butylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Di-n-octylphthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Dibenz(a,h)anthracene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Dibenzofuran	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Diethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Dimethyl phthalate	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Fluoranthene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Fluorene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Hexachlorobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Hexachlorobutadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 05:25	
Hexachlorocyclopentadiene	ND	660	1	B7E0781	05/23/2017	06/01/17 05:25	
Hexachloroethane	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Isophorone	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
N-Nitroso-di-n propylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
N-Nitrosodiphenylamine	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Naphthalene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Nitrobenzene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Pentachlorophenol	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
Phenanthrene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Phenol	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Pyrene	ND	330	1	B7E0781	05/23/2017	06/01/17 05:25	
Pyridine	ND	1600	1	B7E0781	05/23/2017	06/01/17 05:25	
Surrogate: 1,2-Dichlorobenzene-d4	*45.0 %*	*38 - 93*		B7E0781	05/23/2017	*06/01/17 05:25*	
Surrogate: 2,4,6-Tribromophenol	*51.2 %*	*27 - 124*		B7E0781	05/23/2017	*06/01/17 05:25*	
Surrogate: 2-Chlorophenol-d4	*46.9 %*	*36 - 96*		B7E0781	05/23/2017	*06/01/17 05:25*	
Surrogate: 2-Fluorobiphenyl	*58.6 %*	*44 - 100*		B7E0781	05/23/2017	*06/01/17 05:25*	
Surrogate: 2-Fluorophenol	*43.1 %*	*32 - 89*		B7E0781	05/23/2017	*06/01/17 05:25*	
Surrogate: 4-Terphenyl-d14	*56.0 %*	*49 - 123*		B7E0781	05/23/2017	*06/01/17 05:25*	
Surrogate: Nitrobenzene-d5	*52.8 %*	*38 - 104*		B7E0781	05/23/2017	*06/01/17 05:25*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-6-5.0

Lab ID: 1702036-98

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*45.1 %*	*35 - 95*		B7E0781	05/23/2017	*06/01/17 05:25*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-0.5

Lab ID: 1702036-99

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Barium	**110**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Chromium	**14**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Cobalt	**9.3**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Copper	**13**	2.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Lead	**3.7**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Nickel	**10**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Vanadium	**35**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	
Zinc	**41**	1.0	1	B7E0684	05/20/2017	05/22/17 14:04	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:19	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-1.0

Lab ID: 1702036-AA

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Barium	**130**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Chromium	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Cobalt	**11**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Copper	**9.6**	2.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Lead	**2.3**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Nickel	**9.4**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Vanadium	**37**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	
Zinc	**47**	1.0	1	B7E0684	05/20/2017	05/22/17 14:08	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:21	

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
4,4´-DDE	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
4,4´-DDT	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Aldrin	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
alpha-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
alpha-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
beta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Chlordane	ND	8.5	1	B7E0819	05/24/2017	05/24/17 18:57	
delta-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Dieldrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-1.0

Lab ID: 1702036-AA

Organochlorine Pesticides by EPA 8081

Analyst: RL/

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Endosulfan I	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Endosulfan II	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Endosulfan sulfate	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Endrin	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Endrin aldehyde	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Endrin ketone	ND	2.0	1	B7E0819	05/24/2017	05/24/17 18:57	
gamma-BHC	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
gamma-Chlordane	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Heptachlor	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Heptachlor epoxide	ND	1.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Methoxychlor	ND	5.0	1	B7E0819	05/24/2017	05/24/17 18:57	
Toxaphene	ND	50	1	B7E0819	05/24/2017	05/24/17 18:57	
Surrogate: Decachlorobiphenyl	*53.1 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 18:57*	
Surrogate: Tetrachloro-m-xylene	*72.8 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 18:57*	

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 19:29	
Surrogate: Decachlorobiphenyl	*59.0 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 19:29*	
Surrogate: Tetrachloro-m-xylene	*79.5 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 19:29*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-3.0

Lab ID: 1702036-AB

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Barium	**26**	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Chromium	**5.0**	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Cobalt	**2.9**	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Copper	**2.2**	2.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Lead	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Nickel	**2.4**	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Vanadium	**22**	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	
Zinc	**13**	1.0	1	B7E0684	05/20/2017	05/22/17 14:11	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:23	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0622	05/19/2017	05/19/17 14:51	
Surrogate: 4-Bromofluorobenzene	*101 %*	*36 - 125*		B7E0622	05/19/2017	*05/19/17 14:51*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0786	05/23/2017	05/24/17 19:59	
Surrogate: p-Terphenyl	*84.2 %*	*47 - 157*		B7E0786	05/23/2017	*05/24/17 19:59*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-3.0

Lab ID: 1702036-AB

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-3.0

Lab ID: 1702036-AB

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:38	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 12:38	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 12:38	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 12:38	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:38	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:38	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 12:38*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 12:38*	
Surrogate: Dibromofluoromethane	*94.6 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 12:38*	
Surrogate: Toluene-d8	*98.4 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 12:38*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-3.0

Lab ID: 1702036-AB

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
1,2-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
1,3-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
1,4-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2,4,5-Trichlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2,4,6-Trichlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2,4-Dichlorophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
2,4-Dimethylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2,4-Dinitrophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
2,4-Dinitrotoluene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2,6-Dinitrotoluene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2-Chloronaphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2-Chlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2-Methylnaphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2-Methylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
2-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
2-Nitrophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
3,3´-Dichlorobenzidine	ND	660	1	B7E0814	05/24/2017	05/31/17 15:30	
3-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Bromophenyl-phenylether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Chloro-3-methylphenol	ND	660	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Chloroaniline	ND	660	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Chlorophenyl-phenylether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Methylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
4-Nitrophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Acenaphthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Acenaphthylene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzidine (M)	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzo(a)anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzo(a)pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzo(b)fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzo(g,h,i)perylene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzo(k)fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Benzoic acid	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-3.0

Lab ID: 1702036-AB

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0814	05/24/2017	05/31/17 15:30	
bis(2-chloroethoxy)methane	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
bis(2-Chloroethyl)ether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Butylbenzylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Chrysene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Di-n-butylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Di-n-octylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Dibenz(a,h)anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Dibenzofuran	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Diethyl phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Dimethyl phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Fluorene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Hexachlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Hexachlorobutadiene	ND	660	1	B7E0814	05/24/2017	05/31/17 15:30	
Hexachlorocyclopentadiene	ND	660	1	B7E0814	05/24/2017	05/31/17 15:30	
Hexachloroethane	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Isophorone	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
N-Nitroso-di-n propylamine	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
N-Nitrosodiphenylamine	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Naphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Nitrobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Pentachlorophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
Phenanthrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Phenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:30	
Pyridine	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:30	
Surrogate: 1,2-Dichlorobenzene-d4	*58.3 %*	*38 - 93*		B7E0814	05/24/2017	*05/31/17 15:30*	
Surrogate: 2,4,6-Tribromophenol	*68.7 %*	*27 - 124*		B7E0814	05/24/2017	*05/31/17 15:30*	
Surrogate: 2-Chlorophenol-d4	*58.7 %*	*36 - 96*		B7E0814	05/24/2017	*05/31/17 15:30*	
Surrogate: 2-Fluorobiphenyl	*67.3 %*	*44 - 100*		B7E0814	05/24/2017	*05/31/17 15:30*	
Surrogate: 2-Fluorophenol	*54.2 %*	*32 - 89*		B7E0814	05/24/2017	*05/31/17 15:30*	
Surrogate: 4-Terphenyl-d14	*72.3 %*	*49 - 123*		B7E0814	05/24/2017	*05/31/17 15:30*	
Surrogate: Nitrobenzene-d5	*63.2 %*	*38 - 104*		B7E0814	05/24/2017	*05/31/17 15:30*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-3.0

Lab ID: 1702036-AB

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*59.5 %*	*35 - 95*		B7E0814	05/24/2017	*05/31/17 15:30*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-5.0

Lab ID: 1702036-AC

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Arsenic	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Barium	**17**	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Chromium	**3.2**	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Cobalt	**2.1**	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Copper	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Lead	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Nickel	**1.8**	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Vanadium	**14**	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	
Zinc	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 14:14	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:29	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0622	05/19/2017	05/19/17 15:09	
Surrogate: 4-Bromofluorobenzene	*101 %*		*36 - 125*		B7E0622	05/19/2017	*05/19/17 15:09*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**470**	10	1	B7E0786	05/23/2017	05/24/17 20:51	
Surrogate: p-Terphenyl	*82.5 %*		*47 - 157*		B7E0786	05/23/2017	*05/24/17 20:51*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-5.0

Lab ID: 1702036-AC

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-5.0

Lab ID: 1702036-AC

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:57	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 12:57	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 12:57	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 12:57	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 12:57	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 12:57	
Surrogate: 1,2-Dichloroethane-d4	*99.2 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 12:57*	
Surrogate: 4-Bromofluorobenzene	*99.7 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 12:57*	
Surrogate: Dibromofluoromethane	*97.4 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 12:57*	
Surrogate: Toluene-d8	*99.8 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 12:57*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-5.0

Lab ID: 1702036-AC

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
1,2-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
1,3-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
1,4-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2,4,5-Trichlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2,4,6-Trichlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2,4-Dichlorophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
2,4-Dimethylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2,4-Dinitrophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
2,4-Dinitrotoluene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2,6-Dinitrotoluene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2-Chloronaphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2-Chlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2-Methylnaphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2-Methylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
2-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
2-Nitrophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
3,3´-Dichlorobenzidine	ND	660	1	B7E0814	05/24/2017	05/31/17 16:24	
3-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Bromophenyl-phenylether	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Chloro-3-methylphenol	ND	660	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Chloroaniline	ND	660	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Chlorophenyl-phenylether	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Methylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
4-Nitrophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Acenaphthene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Acenaphthylene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzidine (M)	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzo(a)anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzo(a)pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzo(b)fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzo(g,h,i)perylene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzo(k)fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Benzoic acid	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-5.0

Lab ID: 1702036-AC

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	1	B7E0814	05/24/2017	05/31/17 16:24	
bis(2-chloroethoxy)methane	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
bis(2-Chloroethyl)ether	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Butylbenzylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Chrysene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Di-n-butylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Di-n-octylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Dibenz(a,h)anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Dibenzofuran	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Diethyl phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Dimethyl phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Fluorene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Hexachlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Hexachlorobutadiene	ND	660	1	B7E0814	05/24/2017	05/31/17 16:24	
Hexachlorocyclopentadiene	ND	660	1	B7E0814	05/24/2017	05/31/17 16:24	
Hexachloroethane	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Isophorone	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
N-Nitroso-di-n propylamine	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
N-Nitrosodiphenylamine	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Naphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Nitrobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Pentachlorophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
Phenanthrene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Phenol	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 16:24	
Pyridine	ND	1600	1	B7E0814	05/24/2017	05/31/17 16:24	
Surrogate: 1,2-Dichlorobenzene-d4	*58.1 %*	*38 - 93*		B7E0814	05/24/2017	*05/31/17 16:24*	
Surrogate: 2,4,6-Tribromophenol	*66.5 %*	*27 - 124*		B7E0814	05/24/2017	*05/31/17 16:24*	
Surrogate: 2-Chlorophenol-d4	*59.3 %*	*36 - 96*		B7E0814	05/24/2017	*05/31/17 16:24*	
Surrogate: 2-Fluorobiphenyl	*63.6 %*	*44 - 100*		B7E0814	05/24/2017	*05/31/17 16:24*	
Surrogate: 2-Fluorophenol	*54.9 %*	*32 - 89*		B7E0814	05/24/2017	*05/31/17 16:24*	
Surrogate: 4-Terphenyl-d14	*63.6 %*	*49 - 123*		B7E0814	05/24/2017	*05/31/17 16:24*	
Surrogate: Nitrobenzene-d5	*62.1 %*	*38 - 104*		B7E0814	05/24/2017	*05/31/17 16:24*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 7-7-5.0

Lab ID: 1702036-AC

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d5	*59.1 %*	*35 - 95*		B7E0814	05/24/2017	*05/31/17 16:24*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-1-0.5

Lab ID: 1702036-AD

Total Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**250**	1.0	1	B7E0655	05/20/2017	05/22/17 11:49	

STLC Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	**9.6**	1.0	20	B7F0044	06/02/2017	06/02/17 14:12	D1
Lead	**14**	1.0	20	B7F0044	06/02/2017	06/02/17 14:12	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-1-1.0

Lab ID: 1702036-AE

Total Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**130**	1.0	1	B7E0655	05/20/2017	05/22/17 11:51	

STLC Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	**3.4**	1.0	20	B7F0044	06/02/2017	06/02/17 14:14	D1
Lead	**6.0**	1.0	20	B7F0044	06/02/2017	06/02/17 14:14	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-1-3.0

Lab ID: 1702036-AF

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.6**	1.0	1	B7E0655	05/20/2017	05/22/17 11:52	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-1-5.0

Lab ID: 1702036-AG

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.8**	1.0	1	B7E0655	05/20/2017	05/22/17 11:53	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-2-0.5

Lab ID: 1702036-AH

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**44**	1.0	1	B7E0655	05/20/2017	05/22/17 11:54	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-2-1.0

Lab ID: 1702036-AI

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.3**	1.0	1	B7E0655	05/20/2017	05/22/17 11:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-2-3.0

Lab ID: 1702036-AJ

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.3**	1.0	1	B7E0655	05/20/2017	05/22/17 11:59	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-2-5.0

Lab ID: 1702036-AK

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**37**	1.0	1	B7E0655	05/20/2017	05/22/17 12:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-0.5

Lab ID: 1702036-AL

Title 22 Metals by ICP-AES EPA 6010B **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Arsenic	**2.4**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Barium	**110**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Chromium	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Cobalt	**6.9**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Copper	**140**	2.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Lead	**49**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Nickel	**9.6**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Vanadium	**28**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	
Zinc	**120**	1.0	1	B7E0684	05/20/2017	05/22/17 14:24	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:31	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Arsenic	**1.5**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Barium	**70**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Chromium	**7.3**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Cobalt	**4.9**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Copper	**34**	2.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Lead	**35**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Nickel	**7.4**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Vanadium	**21**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	
Zinc	**65**	1.0	1	B7E0684	05/20/2017	05/22/17 14:27	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7E0679	05/20/2017	05/22/17 17:33	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		ND	1.0	1	B7E0622	05/19/2017	05/19/17 15:27	
Surrogate: 4-Bromofluorobenzene	*96.1 %*		*36 - 125*		B7E0622	05/19/2017	*05/19/17 15:27*	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte		Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		ND	10	1	B7E0786	05/23/2017	05/24/17 20:16	
Surrogate: p-Terphenyl	*85.9 %*		*47 - 157*		B7E0786	05/23/2017	*05/24/17 20:16*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Organochlorine Pesticides by EPA 8081 **Analyst: RL/**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4´-DDD	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
4,4´-DDE	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
4,4´-DDT	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Aldrin	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
alpha-BHC	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
alpha-Chlordane	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
beta-BHC	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Chlordane	ND	42	5	B7E0819	05/24/2017	05/24/17 19:08	D1
delta-BHC	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Dieldrin	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endosulfan I	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endosulfan II	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endosulfan sulfate	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endosulfan Sulfate [2C]	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endrin	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endrin aldehyde	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Endrin ketone	ND	10	5	B7E0819	05/24/2017	05/24/17 19:08	D1
gamma-BHC	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
gamma-Chlordane	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Heptachlor	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Heptachlor epoxide	ND	5.0	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Methoxychlor	ND	25	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Toxaphene	ND	250	5	B7E0819	05/24/2017	05/24/17 19:08	D1
Surrogate: Decachlorobiphenyl	*83.5 %*	*27 - 123*		B7E0819	05/24/2017	*05/24/17 19:08*	
Surrogate: Tetrachloro-m-xylene	*40.3 %*	*26 - 108*		B7E0819	05/24/2017	*05/24/17 19:08*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Polychlorinated Biphenyls by EPA 8082

Analyst: LT

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1221	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1232	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1242	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1248	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1254	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1260	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1262	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Aroclor 1268	ND	16	1	B7E0819	05/24/2017	05/24/17 19:48	
Surrogate: Decachlorobiphenyl	*41.6 %*	*18 - 136*		B7E0819	05/24/2017	*05/24/17 19:48*	
Surrogate: Tetrachloro-m-xylene	*57.1 %*	*30 - 130*		B7E0819	05/24/2017	*05/24/17 19:48*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 13:15	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 13:15	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 13:15	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 13:15	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 13:15	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 13:15	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 13:15*	
Surrogate: 4-Bromofluorobenzene	*94.8 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 13:15*	
Surrogate: Dibromofluoromethane	*92.3 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 13:15*	
Surrogate: Toluene-d8	*95.7 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 13:15*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
1,2-Dichlorobenzene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
1,3-Dichlorobenzene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
1,4-Dichlorobenzene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,4,5-Trichlorophenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,4,6-Trichlorophenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,4-Dichlorophenol	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,4-Dimethylphenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,4-Dinitrophenol	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,4-Dinitrotoluene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2,6-Dinitrotoluene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2-Chloronaphthalene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2-Chlorophenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2-Methylnaphthalene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2-Methylphenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2-Nitroaniline	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
2-Nitrophenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
3,3´-Dichlorobenzidine	ND	13000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
3-Nitroaniline	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4,6-Dinitro-2-methyphenol	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Bromophenyl-phenylether	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Chloro-3-methylphenol	ND	13000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Chloroaniline	ND	13000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Chlorophenyl-phenylether	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Methylphenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Nitroaniline	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
4-Nitrophenol	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Acenaphthene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Acenaphthylene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Anthracene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzidine (M)	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzo(a)anthracene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzo(a)pyrene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzo(b)fluoranthene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzo(g,h,i)perylene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzo(k)fluoranthene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzoic acid	ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Benzyl alcohol	ND	13000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
bis(2-chloroethoxy)methane	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
bis(2-Chloroethyl)ether	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
bis(2-chloroisopropyl)ether	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
bis(2-ethylhexyl)phthalate	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Butylbenzylphthalate	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Chrysene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Di-n-butylphthalate	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Di-n-octylphthalate	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Dibenz(a,h)anthracene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Dibenzofuran	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Diethyl phthalate	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Dimethyl phthalate	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Fluoranthene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Fluorene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Hexachlorobenzene	ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Hexachlorobutadiene	ND	13000	20	B7E0814	05/24/2017	05/31/17 22:18	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-1.0

Lab ID: 1702036-AM

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte		Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorocyclopentadiene		ND	13000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Hexachloroethane		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Indeno(1,2,3-cd)pyrene		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Isophorone		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
N-Nitroso-di-n propylamine		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
N-Nitrosodiphenylamine		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Naphthalene		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Nitrobenzene		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Pentachlorophenol		ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Phenanthrene		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Phenol		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Pyrene		ND	6600	20	B7E0814	05/24/2017	05/31/17 22:18	D1
Pyridine		ND	33000	20	B7E0814	05/24/2017	05/31/17 22:18	
Surrogate: 1,2-Dichlorobenzene-d4	*0%*		*38 - 93*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*		*27 - 124*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: 2-Chlorophenol-d4	*0%*		*36 - 96*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: 2-Fluorobiphenyl	*0%*		*44 - 100*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: 2-Fluorophenol	*0%*		*32 - 89*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: 4-Terphenyl-d14	*0%*		*49 - 123*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: Nitrobenzene-d5	*0%*		*38 - 104*		B7E0814	05/24/2017	*05/31/17 22:18*	S4
Surrogate: Phenol-d5	*0%*		*35 - 95*		B7E0814	05/24/2017	*05/31/17 22:18*	S4

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-3.0

Lab ID: 1702036-AN

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Arsenic	**2.6**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Barium	**110**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Cadmium	**1.7**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Chromium	**11**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Cobalt	**6.0**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Copper	**41**	2.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Lead	**65**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Nickel	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Selenium	**1.2**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Vanadium	**23**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	
Zinc	**210**	1.0	1	B7E0684	05/20/2017	05/22/17 14:30	

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:45	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	1.0	20	B7F0044	06/02/2017	06/02/17 14:15	D1
Lead	**11**	1.0	20	B7F0044	06/02/2017	06/02/17 14:15	D1

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.11**	0.10	1	B7E0679	05/20/2017	05/22/17 17:35	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-5.0

Lab ID: 1702036-AO

Title 22 Metals by ICP-AES EPA 6010B

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Arsenic	**2.3**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Barium	**68**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Beryllium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Cadmium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Chromium	**22**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Cobalt	**12**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Copper	**23**	2.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Lead	**5.9**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Molybdenum	ND	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Nickel	**20**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Selenium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Silver	ND	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Thallium	ND	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Vanadium	**44**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	
Zinc	**52**	1.0	1	B7E0684	05/20/2017	05/22/17 17:59	

Hexavalent Chromium by EPA 7196A/3060A

Analyst: SLO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexavalent Chromium	ND	1.0	1	B7F0053	06/01/2017	06/02/17 11:00	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.14**	0.10	1	B7E0679	05/20/2017	05/22/17 17:37	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7E0622	05/19/2017	05/19/17 15:46	
Surrogate: 4-Bromofluorobenzene	*109 %*	*36 - 125*		B7E0622	05/19/2017	*05/19/17 15:46*	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-5.0

Lab ID: 1702036-AO

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7E0786	05/23/2017	05/24/17 20:33	
Surrogate: p-Terphenyl	*73.7 %*	*47 - 157*		B7E0786	05/23/2017	*05/24/17 20:33*	

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,1,1-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,1,2,2-Tetrachloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,1,2-Trichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,1-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,1-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,1-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2,3-Trichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2,3-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2,4-Trichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2,4-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2-Dibromo-3-chloropropane	ND	10	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2-Dibromoethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2-Dichloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,3,5-Trimethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,3-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,3-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
1,4-Dichlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
2,2-Dichloropropane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
2-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
4-Chlorotoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
4-Isopropyltoluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Benzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Bromobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Bromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Bromodichloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Bromoform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Bromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-5.0

Lab ID: 1702036-AO

Volatile Organic Compounds by EPA 8260B **Analyst: AG**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Carbon tetrachloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Chlorobenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Chloroethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Chloroform	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Chloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
cis-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
cis-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Di-isopropyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Dibromochloromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Dibromomethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Dichlorodifluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Ethyl Acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 10:27	
Ethyl Ether	ND	50	1	B7E0654	05/19/2017	05/19/17 10:27	
Ethyl tert-butyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Ethylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Freon-113	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Hexachlorobutadiene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Isopropylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
m,p-Xylene	ND	10	1	B7E0654	05/19/2017	05/19/17 10:27	
Methylene chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
MTBE	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
n-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
n-Propylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Naphthalene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
o-Xylene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
sec-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Styrene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
tert-Amyl methyl ether	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
tert-Butanol	ND	100	1	B7E0654	05/19/2017	05/19/17 10:27	
tert-Butylbenzene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Tetrachloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Toluene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
trans-1,2-Dichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
trans-1,3-Dichloropropene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Trichloroethene	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Trichlorofluoromethane	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-5.0

Lab ID: 1702036-AO

Volatile Organic Compounds by EPA 8260B

Analyst: AG

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl acetate	ND	50	1	B7E0654	05/19/2017	05/19/17 10:27	
Vinyl chloride	ND	5.0	1	B7E0654	05/19/2017	05/19/17 10:27	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*12 - 186*		B7E0654	05/19/2017	*05/19/17 10:27*	
Surrogate: 4-Bromofluorobenzene	*106 %*	*23 - 162*		B7E0654	05/19/2017	*05/19/17 10:27*	
Surrogate: Dibromofluoromethane	*94.4 %*	*23 - 179*		B7E0654	05/19/2017	*05/19/17 10:27*	
Surrogate: Toluene-d8	*97.9 %*	*26 - 164*		B7E0654	05/19/2017	*05/19/17 10:27*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: SP

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
1,2-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
1,3-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
1,4-Dichlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2,4,5-Trichlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2,4,6-Trichlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2,4-Dichlorophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
2,4-Dimethylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2,4-Dinitrophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
2,4-Dinitrotoluene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2,6-Dinitrotoluene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2-Chloronaphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2-Chlorophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2-Methylnaphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2-Methylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
2-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
2-Nitrophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
3,3´-Dichlorobenzidine	ND	660	1	B7E0814	05/24/2017	05/31/17 15:57	
3-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
4,6-Dinitro-2-methyphenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
4-Bromophenyl-phenylether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
4-Chloro-3-methylphenol	ND	660	1	B7E0814	05/24/2017	05/31/17 15:57	
4-Chloroaniline	ND	660	1	B7E0814	05/24/2017	05/31/17 15:57	
4-Chlorophenyl-phenylether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
4-Methylphenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
4-Nitroaniline	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-5.0

Lab ID: 1702036-AO

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Nitrophenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Acenaphthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Acenaphthylene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzidine (M)	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzo(a)anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzo(a)pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzo(b)fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzo(g,h,i)perylene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzo(k)fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzoic acid	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
Benzyl alcohol	ND	660	1	B7E0814	05/24/2017	05/31/17 15:57	
bis(2-chloroethoxy)methane	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
bis(2-Chloroethyl)ether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
bis(2-chloroisopropyl)ether	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
bis(2-ethylhexyl)phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Butylbenzylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Chrysene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Di-n-butylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Di-n-octylphthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Dibenz(a,h)anthracene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Dibenzofuran	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Diethyl phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Dimethyl phthalate	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Fluoranthene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Fluorene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Hexachlorobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Hexachlorobutadiene	ND	660	1	B7E0814	05/24/2017	05/31/17 15:57	
Hexachlorocyclopentadiene	ND	660	1	B7E0814	05/24/2017	05/31/17 15:57	
Hexachloroethane	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Indeno(1,2,3-cd)pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Isophorone	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
N-Nitroso-di-n propylamine	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
N-Nitrosodiphenylamine	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Naphthalene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Nitrobenzene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Pentachlorophenol	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 8-3-5.0

Lab ID: 1702036-AO

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Phenanthrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Phenol	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Pyrene	ND	330	1	B7E0814	05/24/2017	05/31/17 15:57	
Pyridine	ND	1600	1	B7E0814	05/24/2017	05/31/17 15:57	
Surrogate: 1,2-Dichlorobenzene-d4	*47.2 %*	*38 - 93*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: 2,4,6-Tribromophenol	*55.1 %*	*27 - 124*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: 2-Chlorophenol-d4	*49.2 %*	*36 - 96*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: 2-Fluorobiphenyl	*55.4 %*	*44 - 100*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: 2-Fluorophenol	*46.6 %*	*32 - 89*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: 4-Terphenyl-d14	*65.3 %*	*49 - 123*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: Nitrobenzene-d5	*52.1 %*	*38 - 104*		B7E0814	05/24/2017	*05/31/17 15:57*	
Surrogate: Phenol-d5	*50.6 %*	*35 - 95*		B7E0814	05/24/2017	*05/31/17 15:57*	

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0655 - EPA 3050B_S										
Blank (B7E0655-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Lead	ND	1.0	0.19							
LCS (B7E0655-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Lead	46.0863	1.0	0.19	50.0000		92.2	80 - 120			
Matrix Spike (B7E0655-MS1)			**Source: 1702055-01**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Lead	82.4062	1.0	0.19	125.000	6.92486	60.4	34 - 129			
Matrix Spike Dup (B7E0655-MSD1)			**Source: 1702055-01**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Lead	93.4371	1.0	0.19	125.000	6.92486	69.2	34 - 129	12.5	20	

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0669 - EPA 3050B_S										
Blank (B7E0669-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	ND	2.0	0.44							
Arsenic	ND	1.0	0.70							
Barium	ND	1.0	0.10							
Beryllium	ND	1.0	0.04							
Cadmium	ND	1.0	0.09							
Chromium	ND	1.0	0.12							
Cobalt	ND	1.0	0.10							
Copper	ND	2.0	0.11							
Lead	ND	1.0	0.19							
Molybdenum	ND	1.0	0.13							
Nickel	ND	1.0	0.10							
Selenium	ND	1.0	0.88							
Silver	ND	1.0	0.07							
Thallium	ND	1.0	0.42							
Vanadium	ND	1.0	0.19							
Zinc	ND	1.0	0.18							
LCS (B7E0669-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	48.1300	2.0	0.44	50.0000		96.3	80 - 120			
Arsenic	44.5354	1.0	0.70	50.0000		89.1	80 - 120			
Barium	49.2158	1.0	0.10	50.0000		98.4	80 - 120			
Beryllium	46.1623	1.0	0.04	50.0000		92.3	80 - 120			
Cadmium	46.0922	1.0	0.09	50.0000		92.2	80 - 120			
Chromium	49.1984	1.0	0.12	50.0000		98.4	80 - 120			
Cobalt	48.0067	1.0	0.10	50.0000		96.0	80 - 120			
Copper	48.3954	2.0	0.11	50.0000		96.8	80 - 120			
Lead	46.5985	1.0	0.19	50.0000		93.2	80 - 120			
Molybdenum	46.5292	1.0	0.13	50.0000		93.1	80 - 120			
Nickel	46.7901	1.0	0.10	50.0000		93.6	80 - 120			
Selenium	42.9070	1.0	0.88	50.0000		85.8	80 - 120			
Silver	45.6082	1.0	0.07	50.0000		91.2	80 - 120			
Thallium	47.6197	1.0	0.42	50.0000		95.2	80 - 120			
Vanadium	48.4400	1.0	0.19	50.0000		96.9	80 - 120			
Zinc	44.7520	1.0	0.18	50.0000		89.5	80 - 120			
Duplicate (B7E0669-DUP1)				**Source: 1702018-85**	Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	ND	2.0	0.44		0.753624			NR	20	
Arsenic	1.41506	1.0	0.70		0.902766			44.2	20	R
Barium	40.2379	1.0	0.10		59.3570			38.4	20	R
Beryllium	ND	1.0	0.04		ND			NR	20	
Cadmium	ND	1.0	0.09		ND			NR	20	
Chromium	26.9042	1.0	0.12		40.5312			40.4	20	R

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0669 - EPA 3050B_S (continued)										
Duplicate (B7E0669-DUP1) - Continued			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Cobalt	11.4744	1.0	0.10		11.6221			1.28	20	
Copper	14.0148	2.0	0.11		15.0233			6.95	20	
Lead	14.8485	1.0	0.19		18.2077			20.3	20	R
Molybdenum	ND	1.0	0.13		ND			NR	20	
Nickel	35.2828	1.0	0.10		31.9466			9.92	20	
Selenium	ND	1.0	0.88		1.21525			NR	20	
Silver	ND	1.0	0.07		ND			NR	20	
Thallium	ND	1.0	0.42		ND			NR	20	
Vanadium	53.7270	1.0	0.19		73.5864			31.2	20	R
Zinc	23.7289	1.0	0.18		23.4294			1.27	20	
Matrix Spike (B7E0669-MS1)			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	80.5920	2.0	0.44	125.000	0.753624	63.9	34 - 103			
Arsenic	90.4464	1.0	0.70	125.000	0.902766	71.6	59 - 103			
Barium	168.668	1.0	0.10	125.000	59.3570	87.4	30 - 134			
Beryllium	98.4693	1.0	0.04	125.000	ND	78.8	62 - 105			
Cadmium	96.4720	1.0	0.09	125.000	ND	77.2	53 - 102			
Chromium	146.976	1.0	0.12	125.000	40.5312	85.2	51 - 111			
Cobalt	107.139	1.0	0.10	125.000	11.6221	76.4	55 - 105			
Copper	127.556	2.0	0.11	125.000	15.0233	90.0	53 - 126			
Lead	110.556	1.0	0.19	125.000	18.2077	73.9	34 - 129			
Molybdenum	93.5890	1.0	0.13	125.000	ND	74.9	57 - 105			
Nickel	122.249	1.0	0.10	125.000	31.9466	72.2	49 - 109			
Selenium	88.3522	1.0	0.88	125.000	1.21525	69.7	57 - 99			
Silver	103.067	1.0	0.07	125.000	ND	82.5	64 - 105			
Thallium	82.9882	1.0	0.42	125.000	ND	66.4	46 - 105			
Vanadium	191.620	1.0	0.19	125.000	73.5864	94.4	60 - 109			
Zinc	114.004	1.0	0.18	125.000	23.4294	72.5	29 - 122			
Matrix Spike Dup (B7E0669-MSD1)			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	80.2187	2.0	0.44	125.000	0.753624	63.6	34 - 103	0.464	20	
Arsenic	91.9758	1.0	0.70	125.000	0.902766	72.9	59 - 103	1.68	20	
Barium	140.373	1.0	0.10	125.000	59.3570	64.8	30 - 134	18.3	20	
Beryllium	98.2005	1.0	0.04	125.000	ND	78.6	62 - 105	0.273	20	
Cadmium	92.2885	1.0	0.09	125.000	ND	73.8	53 - 102	4.43	20	
Chromium	122.228	1.0	0.12	125.000	40.5312	65.4	51 - 111	18.4	20	
Cobalt	104.551	1.0	0.10	125.000	11.6221	74.3	55 - 105	2.45	20	
Copper	116.646	2.0	0.11	125.000	15.0233	81.3	53 - 126	8.94	20	
Lead	102.037	1.0	0.19	125.000	18.2077	67.1	34 - 129	8.01	20	
Molybdenum	93.5026	1.0	0.13	125.000	ND	74.8	57 - 105	0.0924	20	
Nickel	126.852	1.0	0.10	125.000	31.9466	75.9	49 - 109	3.70	20	
Selenium	87.8392	1.0	0.88	125.000	1.21525	69.3	57 - 99	0.582	20	

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250 Goddard	Report To : Naresh Bellana
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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0669 - EPA 3050B_S (continued)										
Matrix Spike Dup (B7E0669-MSD1) - Continued			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Silver	96.6332	1.0	0.07	125.000	ND	77.3	64 - 105	6.44	20	
Thallium	85.1528	1.0	0.42	125.000	ND	68.1	46 - 105	2.57	20	
Vanadium	147.037	1.0	0.19	125.000	73.5864	58.8	60 - 109	26.3	20	M1, R
Zinc	109.636	1.0	0.18	125.000	23.4294	69.0	29 - 122	3.91	20	

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
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Irvine , CA 92618	Reported : 06/05/2017

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0680 - EPA 3050B_S										
Blank (B7E0680-BLK1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	ND	2.0	0.44							
Arsenic	ND	1.0	0.70							
Barium	ND	1.0	0.10							
Beryllium	ND	1.0	0.04							
Cadmium	ND	1.0	0.09							
Chromium	ND	1.0	0.12							
Cobalt	ND	1.0	0.10							
Copper	ND	2.0	0.11							
Lead	ND	1.0	0.19							
Molybdenum	ND	1.0	0.13							
Nickel	ND	1.0	0.10							
Selenium	ND	1.0	0.88							
Silver	ND	1.0	0.07							
Thallium	ND	1.0	0.42							
Vanadium	ND	1.0	0.19							
Zinc	ND	1.0	0.18							
LCS (B7E0680-BS1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	48.1492	2.0	0.44	50.0000		96.3	80 - 120			
Arsenic	45.1386	1.0	0.70	50.0000		90.3	80 - 120			
Barium	49.3993	1.0	0.10	50.0000		98.8	80 - 120			
Beryllium	45.6704	1.0	0.04	50.0000		91.3	80 - 120			
Cadmium	46.1636	1.0	0.09	50.0000		92.3	80 - 120			
Chromium	49.1350	1.0	0.12	50.0000		98.3	80 - 120			
Cobalt	48.4948	1.0	0.10	50.0000		97.0	80 - 120			
Copper	48.4942	2.0	0.11	50.0000		97.0	80 - 120			
Lead	46.6505	1.0	0.19	50.0000		93.3	80 - 120			
Molybdenum	46.6602	1.0	0.13	50.0000		93.3	80 - 120			
Nickel	46.9446	1.0	0.10	50.0000		93.9	80 - 120			
Selenium	42.8242	1.0	0.88	50.0000		85.6	80 - 120			
Silver	45.6022	1.0	0.07	50.0000		91.2	80 - 120			
Thallium	47.4812	1.0	0.42	50.0000		95.0	80 - 120			
Vanadium	48.4848	1.0	0.19	50.0000		97.0	80 - 120			
Zinc	44.5922	1.0	0.18	50.0000		89.2	80 - 120			
Matrix Spike (B7E0680-MS1)			**Source: 1702036-10**			Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	81.3363	2.0	0.44	125.000	ND	65.1	34 - 103			
Arsenic	95.2716	1.0	0.70	125.000	0.834842	75.5	59 - 103			
Barium	217.647	1.0	0.10	125.000	131.719	68.7	30 - 134			
Beryllium	96.7535	1.0	0.04	125.000	ND	77.4	62 - 105			
Cadmium	91.9876	1.0	0.09	125.000	0.590169	73.1	53 - 102			
Chromium	107.897	1.0	0.12	125.000	11.1326	77.4	51 - 111			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0680 - EPA 3050B_S (continued)										
Matrix Spike (B7E0680-MS1) - Continued			**Source: 1702036-10**			Prepared: 5/20/2017 Analyzed: 5/22/2017				
Cobalt	99.3906	1.0	0.10	125.000	6.51811	74.3	55 - 105			
Copper	140.942	2.0	0.11	125.000	25.8576	92.1	53 - 126			
Lead	235.454	1.0	0.19	125.000	128.953	85.2	34 - 129			
Molybdenum	94.1353	1.0	0.13	125.000	ND	75.3	57 - 105			
Nickel	103.206	1.0	0.10	125.000	10.2359	74.4	49 - 109			
Selenium	89.8338	1.0	0.88	125.000	ND	71.9	57 - 99			
Silver	95.7218	1.0	0.07	125.000	ND	76.6	64 - 105			
Thallium	83.6303	1.0	0.42	125.000	ND	66.9	46 - 105			
Vanadium	120.435	1.0	0.19	125.000	26.9997	74.7	60 - 109			
Zinc	243.145	1.0	0.18	125.000	153.219	71.9	29 - 122			
Matrix Spike Dup (B7E0680-MSD1)			**Source: 1702036-10**			Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	79.4896	2.0	0.44	125.000	ND	63.6	34 - 103	2.30	20	
Arsenic	94.1084	1.0	0.70	125.000	0.834842	74.6	59 - 103	1.23	20	
Barium	214.267	1.0	0.10	125.000	131.719	66.0	30 - 134	1.57	20	
Beryllium	94.6004	1.0	0.04	125.000	ND	75.7	62 - 105	2.25	20	
Cadmium	93.5058	1.0	0.09	125.000	0.590169	74.3	53 - 102	1.64	20	
Chromium	104.732	1.0	0.12	125.000	11.1326	74.9	51 - 111	2.98	20	
Cobalt	95.8508	1.0	0.10	125.000	6.51811	71.5	55 - 105	3.63	20	
Copper	120.770	2.0	0.11	125.000	25.8576	75.9	53 - 126	15.4	20	
Lead	255.513	1.0	0.19	125.000	128.953	101	34 - 129	8.17	20	
Molybdenum	93.4982	1.0	0.13	125.000	ND	74.8	57 - 105	0.679	20	
Nickel	98.6401	1.0	0.10	125.000	10.2359	70.7	49 - 109	4.52	20	
Selenium	89.1178	1.0	0.88	125.000	ND	71.3	57 - 99	0.800	20	
Silver	98.9142	1.0	0.07	125.000	ND	79.1	64 - 105	3.28	20	
Thallium	84.9448	1.0	0.42	125.000	ND	68.0	46 - 105	1.56	20	
Vanadium	119.650	1.0	0.19	125.000	26.9997	74.1	60 - 109	0.653	20	
Zinc	218.704	1.0	0.18	125.000	153.219	52.4	29 - 122	10.6	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0681 - EPA 3050B_S										
Blank (B7E0681-BLK1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	ND	2.0	0.44							
Arsenic	ND	1.0	0.70							
Barium	ND	1.0	0.10							
Beryllium	ND	1.0	0.04							
Cadmium	ND	1.0	0.09							
Chromium	ND	1.0	0.12							
Cobalt	ND	1.0	0.10							
Copper	ND	2.0	0.11							
Lead	ND	1.0	0.19							
Molybdenum	ND	1.0	0.13							
Nickel	ND	1.0	0.10							
Selenium	ND	1.0	0.88							
Silver	ND	1.0	0.07							
Thallium	ND	1.0	0.42							
Vanadium	ND	1.0	0.19							
Zinc	ND	1.0	0.18							
LCS (B7E0681-BS1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	47.7136	2.0	0.44	50.0000		95.4	80 - 120			
Arsenic	45.0253	1.0	0.70	50.0000		90.1	80 - 120			
Barium	49.6152	1.0	0.10	50.0000		99.2	80 - 120			
Beryllium	47.1233	1.0	0.04	50.0000		94.2	80 - 120			
Cadmium	46.2546	1.0	0.09	50.0000		92.5	80 - 120			
Chromium	49.4074	1.0	0.12	50.0000		98.8	80 - 120			
Cobalt	48.4099	1.0	0.10	50.0000		96.8	80 - 120			
Copper	48.6985	2.0	0.11	50.0000		97.4	80 - 120			
Lead	47.0584	1.0	0.19	50.0000		94.1	80 - 120			
Molybdenum	46.7895	1.0	0.13	50.0000		93.6	80 - 120			
Nickel	46.9410	1.0	0.10	50.0000		93.9	80 - 120			
Selenium	42.5626	1.0	0.88	50.0000		85.1	80 - 120			
Silver	46.9045	1.0	0.07	50.0000		93.8	80 - 120			
Thallium	47.6864	1.0	0.42	50.0000		95.4	80 - 120			
Vanadium	48.7992	1.0	0.19	50.0000		97.6	80 - 120			
Zinc	44.3126	1.0	0.18	50.0000		88.6	80 - 120			
Matrix Spike (B7E0681-MS1)				**Source: 1702036-30**		Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	83.7971	2.0	0.44	125.000	1.03701	66.2	34 - 103			
Arsenic	97.3360	1.0	0.70	125.000	2.09585	76.2	59 - 103			
Barium	209.747	1.0	0.10	125.000	83.8022	101	30 - 134			
Beryllium	100.171	1.0	0.04	125.000	ND	80.1	62 - 105			
Cadmium	95.1932	1.0	0.09	125.000	0.242475	76.0	53 - 102			
Chromium	111.953	1.0	0.12	125.000	10.0157	81.5	51 - 111			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0681 - EPA 3050B_S (continued)										
Matrix Spike (B7E0681-MS1) - Continued			**Source: 1702036-30**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Cobalt	101.857	1.0	0.10	125.000	5.28542	77.3	55 - 105			
Copper	124.320	2.0	0.11	125.000	19.1014	84.2	53 - 126			
Lead	190.147	1.0	0.19	125.000	68.4512	97.4	34 - 129			
Molybdenum	97.5718	1.0	0.13	125.000	ND	78.1	57 - 105			
Nickel	104.680	1.0	0.10	125.000	7.60932	77.7	49 - 109			
Selenium	91.2228	1.0	0.88	125.000	ND	73.0	57 - 99			
Silver	97.7980	1.0	0.07	125.000	ND	78.2	64 - 105			
Thallium	90.3912	1.0	0.42	125.000	ND	72.3	46 - 105			
Vanadium	123.418	1.0	0.19	125.000	21.8243	81.3	60 - 109			
Zinc	192.747	1.0	0.18	125.000	98.8063	75.2	29 - 122			
Matrix Spike Dup (B7E0681-MSD1)			**Source: 1702036-30**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	83.9100	2.0	0.44	125.000	1.03701	66.3	34 - 103	0.135	20	
Arsenic	97.7128	1.0	0.70	125.000	2.09585	76.5	59 - 103	0.386	20	
Barium	228.264	1.0	0.10	125.000	83.8022	116	30 - 134	8.46	20	
Beryllium	100.695	1.0	0.04	125.000	ND	80.6	62 - 105	0.521	20	
Cadmium	97.7646	1.0	0.09	125.000	0.242475	78.0	53 - 102	2.67	20	
Chromium	114.369	1.0	0.12	125.000	10.0157	83.5	51 - 111	2.13	20	
Cobalt	104.317	1.0	0.10	125.000	5.28542	79.2	55 - 105	2.39	20	
Copper	127.596	2.0	0.11	125.000	19.1014	86.8	53 - 126	2.60	20	
Lead	199.376	1.0	0.19	125.000	68.4512	105	34 - 129	4.74	20	
Molybdenum	98.1036	1.0	0.13	125.000	ND	78.5	57 - 105	0.544	20	
Nickel	108.370	1.0	0.10	125.000	7.60932	80.6	49 - 109	3.46	20	
Selenium	92.4668	1.0	0.88	125.000	ND	74.0	57 - 99	1.35	20	
Silver	99.1930	1.0	0.07	125.000	ND	79.4	64 - 105	1.42	20	
Thallium	89.8745	1.0	0.42	125.000	ND	71.9	46 - 105	0.573	20	
Vanadium	126.954	1.0	0.19	125.000	21.8243	84.1	60 - 109	2.82	20	
Zinc	206.000	1.0	0.18	125.000	98.8063	85.8	29 - 122	6.65	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0682 - EPA 3050B_S										
Blank (B7E0682-BLK1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	ND	2.0	0.44							
Arsenic	ND	1.0	0.70							
Barium	ND	1.0	0.10							
Beryllium	ND	1.0	0.04							
Cadmium	ND	1.0	0.09							
Chromium	ND	1.0	0.12							
Cobalt	ND	1.0	0.10							
Copper	ND	2.0	0.11							
Lead	ND	1.0	0.19							
Molybdenum	ND	1.0	0.13							
Nickel	ND	1.0	0.10							
Selenium	ND	1.0	0.88							
Silver	ND	1.0	0.07							
Thallium	ND	1.0	0.42							
Vanadium	ND	1.0	0.19							
Zinc	ND	1.0	0.18							
LCS (B7E0682-BS1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	47.4809	2.0	0.44	50.0000		95.0	80 - 120			
Arsenic	44.7524	1.0	0.70	50.0000		89.5	80 - 120			
Barium	49.3941	1.0	0.10	50.0000		98.8	80 - 120			
Beryllium	45.8855	1.0	0.04	50.0000		91.8	80 - 120			
Cadmium	46.2236	1.0	0.09	50.0000		92.4	80 - 120			
Chromium	49.0604	1.0	0.12	50.0000		98.1	80 - 120			
Cobalt	48.2626	1.0	0.10	50.0000		96.5	80 - 120			
Copper	48.3862	2.0	0.11	50.0000		96.8	80 - 120			
Lead	46.9692	1.0	0.19	50.0000		93.9	80 - 120			
Molybdenum	46.5564	1.0	0.13	50.0000		93.1	80 - 120			
Nickel	46.9770	1.0	0.10	50.0000		94.0	80 - 120			
Selenium	42.8216	1.0	0.88	50.0000		85.6	80 - 120			
Silver	46.1722	1.0	0.07	50.0000		92.3	80 - 120			
Thallium	47.3385	1.0	0.42	50.0000		94.7	80 - 120			
Vanadium	48.4747	1.0	0.19	50.0000		96.9	80 - 120			
Zinc	44.5242	1.0	0.18	50.0000		89.0	80 - 120			
Matrix Spike (B7E0682-MS1)			**Source: 1702036-50**			Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	91.5691	2.0	0.44	125.000	ND	73.3	34 - 103			
Arsenic	105.348	1.0	0.70	125.000	3.93645	81.1	59 - 103			
Barium	195.552	1.0	0.10	125.000	75.2534	96.2	30 - 134			
Beryllium	104.243	1.0	0.04	125.000	ND	83.4	62 - 105			
Cadmium	102.228	1.0	0.09	125.000	0.128202	81.7	53 - 102			
Chromium	120.928	1.0	0.12	125.000	9.97620	88.8	51 - 111			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0682 - EPA 3050B_S (continued)										
Matrix Spike (B7E0682-MS1) - Continued			**Source: 1702036-50**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Cobalt	109.842	1.0	0.10	125.000	6.65988	82.5	55 - 105			
Copper	129.700	2.0	0.11	125.000	13.0956	93.3	53 - 126			
Lead	157.374	1.0	0.19	125.000	59.2122	78.5	34 - 129			
Molybdenum	104.260	1.0	0.13	125.000	ND	83.4	57 - 105			
Nickel	109.308	1.0	0.10	125.000	6.89510	81.9	49 - 109			
Selenium	98.8142	1.0	0.88	125.000	ND	79.1	57 - 99			
Silver	108.439	1.0	0.07	125.000	ND	86.8	64 - 105			
Thallium	87.6478	1.0	0.42	125.000	ND	70.1	46 - 105			
Vanadium	141.209	1.0	0.19	125.000	27.2890	91.1	60 - 109			
Zinc	182.033	1.0	0.18	125.000	82.8646	79.3	29 - 122			
Matrix Spike Dup (B7E0682-MSD1)			**Source: 1702036-50**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	92.3803	2.0	0.44	125.000	ND	73.9	34 - 103	0.882	20	
Arsenic	107.211	1.0	0.70	125.000	3.93645	82.6	59 - 103	1.75	20	
Barium	195.186	1.0	0.10	125.000	75.2534	95.9	30 - 134	0.187	20	
Beryllium	105.672	1.0	0.04	125.000	ND	84.5	62 - 105	1.36	20	
Cadmium	102.596	1.0	0.09	125.000	0.128202	82.0	53 - 102	0.359	20	
Chromium	120.597	1.0	0.12	125.000	9.97620	88.5	51 - 111	0.274	20	
Cobalt	109.993	1.0	0.10	125.000	6.65988	82.7	55 - 105	0.137	20	
Copper	128.858	2.0	0.11	125.000	13.0956	92.6	53 - 126	0.651	20	
Lead	154.326	1.0	0.19	125.000	59.2122	76.1	34 - 129	1.96	20	
Molybdenum	105.718	1.0	0.13	125.000	ND	84.6	57 - 105	1.39	20	
Nickel	109.868	1.0	0.10	125.000	6.89510	82.4	49 - 109	0.510	20	
Selenium	99.4353	1.0	0.88	125.000	ND	79.5	57 - 99	0.627	20	
Silver	108.343	1.0	0.07	125.000	ND	86.7	64 - 105	0.0884	20	
Thallium	90.2642	1.0	0.42	125.000	ND	72.2	46 - 105	2.94	20	
Vanadium	140.123	1.0	0.19	125.000	27.2890	90.3	60 - 109	0.772	20	
Zinc	182.831	1.0	0.18	125.000	82.8646	80.0	29 - 122	0.437	20	

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0683 - EPA 3050B_S										
Blank (B7E0683-BLK1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	ND	2.0	0.44							
Arsenic	ND	1.0	0.70							
Barium	ND	1.0	0.10							
Beryllium	ND	1.0	0.04							
Cadmium	ND	1.0	0.09							
Chromium	ND	1.0	0.12							
Cobalt	ND	1.0	0.10							
Copper	ND	2.0	0.11							
Lead	ND	1.0	0.19							
Molybdenum	ND	1.0	0.13							
Nickel	ND	1.0	0.10							
Selenium	ND	1.0	0.88							
Silver	ND	1.0	0.07							
Thallium	ND	1.0	0.42							
Vanadium	ND	1.0	0.19							
Zinc	ND	1.0	0.18							
LCS (B7E0683-BS1)						Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	46.1672	2.0	0.44	50.0000		92.3	80 - 120			
Arsenic	44.8515	1.0	0.70	50.0000		89.7	80 - 120			
Barium	48.2434	1.0	0.10	50.0000		96.5	80 - 120			
Beryllium	46.8490	1.0	0.04	50.0000		93.7	80 - 120			
Cadmium	45.0464	1.0	0.09	50.0000		90.1	80 - 120			
Chromium	44.1247	1.0	0.12	50.0000		88.2	80 - 120			
Cobalt	47.0240	1.0	0.10	50.0000		94.0	80 - 120			
Copper	46.1443	2.0	0.11	50.0000		92.3	80 - 120			
Lead	45.7752	1.0	0.19	50.0000		91.6	80 - 120			
Molybdenum	45.3508	1.0	0.13	50.0000		90.7	80 - 120			
Nickel	45.6150	1.0	0.10	50.0000		91.2	80 - 120			
Selenium	43.1928	1.0	0.88	50.0000		86.4	80 - 120			
Silver	44.4009	1.0	0.07	50.0000		88.8	80 - 120			
Thallium	45.0769	1.0	0.42	50.0000		90.2	80 - 120			
Vanadium	46.3882	1.0	0.19	50.0000		92.8	80 - 120			
Zinc	45.0587	1.0	0.18	50.0000		90.1	80 - 120			
Matrix Spike (B7E0683-MS1)				**Source: 1702036-70**		Prepared: 5/20/2017 Analyzed: 5/22/2017				
Antimony	97.7893	2.0	0.44	125.000	ND	78.2	34 - 103			
Arsenic	108.300	1.0	0.70	125.000	ND	86.6	59 - 103			
Barium	149.463	1.0	0.10	125.000	35.2718	91.4	30 - 134			
Beryllium	114.702	1.0	0.04	125.000	0.224850	91.6	62 - 105			
Cadmium	105.886	1.0	0.09	125.000	0.218618	84.5	53 - 102			
Chromium	107.541	1.0	0.12	125.000	4.49867	82.4	51 - 111			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0683 - EPA 3050B_S (continued)										
Matrix Spike (B7E0683-MS1) - Continued			**Source: 1702036-70**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Cobalt	110.874	1.0	0.10	125.000	3.88326	85.6	55 - 105			
Copper	117.206	2.0	0.11	125.000	3.12230	91.3	53 - 126			
Lead	109.995	1.0	0.19	125.000	1.05199	87.2	34 - 129			
Molybdenum	108.367	1.0	0.13	125.000	ND	86.7	57 - 105			
Nickel	109.493	1.0	0.10	125.000	3.21165	85.0	49 - 109			
Selenium	105.060	1.0	0.88	125.000	ND	84.0	57 - 99			
Silver	107.105	1.0	0.07	125.000	ND	85.7	64 - 105			
Thallium	102.287	1.0	0.42	125.000	ND	81.8	46 - 105			
Vanadium	126.205	1.0	0.19	125.000	15.2134	88.8	60 - 109			
Zinc	122.546	1.0	0.18	125.000	17.1384	84.3	29 - 122			
Matrix Spike Dup (B7E0683-MSD1)			**Source: 1702036-70**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	97.3526	2.0	0.44	125.000	ND	77.9	34 - 103	0.448	20	
Arsenic	107.886	1.0	0.70	125.000	ND	86.3	59 - 103	0.383	20	
Barium	146.634	1.0	0.10	125.000	35.2718	89.1	30 - 134	1.91	20	
Beryllium	111.669	1.0	0.04	125.000	0.224850	89.2	62 - 105	2.68	20	
Cadmium	104.944	1.0	0.09	125.000	0.218618	83.8	53 - 102	0.894	20	
Chromium	105.859	1.0	0.12	125.000	4.49867	81.1	51 - 111	1.58	20	
Cobalt	109.160	1.0	0.10	125.000	3.88326	84.2	55 - 105	1.56	20	
Copper	115.852	2.0	0.11	125.000	3.12230	90.2	53 - 126	1.16	20	
Lead	108.009	1.0	0.19	125.000	1.05199	85.6	34 - 129	1.82	20	
Molybdenum	107.772	1.0	0.13	125.000	ND	86.2	57 - 105	0.550	20	
Nickel	108.120	1.0	0.10	125.000	3.21165	83.9	49 - 109	1.26	20	
Selenium	104.591	1.0	0.88	125.000	ND	83.7	57 - 99	0.447	20	
Silver	106.649	1.0	0.07	125.000	ND	85.3	64 - 105	0.426	20	
Thallium	102.604	1.0	0.42	125.000	ND	82.1	46 - 105	0.310	20	
Vanadium	124.706	1.0	0.19	125.000	15.2134	87.6	60 - 109	1.19	20	

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250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0684 - EPA 3050B_S										
Blank (B7E0684-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	ND	2.0	0.44							
Arsenic	ND	1.0	0.70							
Barium	ND	1.0	0.10							
Beryllium	ND	1.0	0.04							
Cadmium	ND	1.0	0.09							
Chromium	ND	1.0	0.12							
Cobalt	ND	1.0	0.10							
Copper	ND	2.0	0.11							
Lead	ND	1.0	0.19							
Molybdenum	ND	1.0	0.13							
Nickel	ND	1.0	0.10							
Selenium	ND	1.0	0.88							
Silver	ND	1.0	0.07							
Thallium	ND	1.0	0.42							
Vanadium	ND	1.0	0.19							
Zinc	ND	1.0	0.18							
LCS (B7E0684-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	45.8950	2.0	0.44	50.0000		91.8	80 - 120			
Arsenic	45.1677	1.0	0.70	50.0000		90.3	80 - 120			
Barium	48.0854	1.0	0.10	50.0000		96.2	80 - 120			
Beryllium	47.1006	1.0	0.04	50.0000		94.2	80 - 120			
Cadmium	44.3690	1.0	0.09	50.0000		88.7	80 - 120			
Chromium	44.3926	1.0	0.12	50.0000		88.8	80 - 120			
Cobalt	46.9228	1.0	0.10	50.0000		93.8	80 - 120			
Copper	45.9486	2.0	0.11	50.0000		91.9	80 - 120			
Lead	45.7562	1.0	0.19	50.0000		91.5	80 - 120			
Molybdenum	45.1958	1.0	0.13	50.0000		90.4	80 - 120			
Nickel	45.5473	1.0	0.10	50.0000		91.1	80 - 120			
Selenium	42.8758	1.0	0.88	50.0000		85.8	80 - 120			
Silver	41.9287	1.0	0.07	50.0000		83.9	80 - 120			
Thallium	44.4387	1.0	0.42	50.0000		88.9	80 - 120			
Vanadium	45.7443	1.0	0.19	50.0000		91.5	80 - 120			
Zinc	45.1195	1.0	0.18	50.0000		90.2	80 - 120			
Matrix Spike (B7E0684-MS1)				**Source: 1702036-90**	Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	66.2610	2.0	0.44	125.000	ND	53.0	34 - 103			
Arsenic	83.4215	1.0	0.70	125.000	1.19669	65.8	59 - 103			
Barium	159.766	1.0	0.10	125.000	124.230	28.4	30 - 134			M1
Beryllium	81.4490	1.0	0.04	125.000	0.280898	64.9	62 - 105			
Cadmium	87.9645	1.0	0.09	125.000	0.970588	69.6	53 - 102			
Chromium	80.3621	1.0	0.12	125.000	8.79547	57.3	51 - 111			

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0684 - EPA 3050B_S (continued)										
Matrix Spike (B7E0684-MS1) - Continued			**Source: 1702036-90**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Cobalt	80.1506	1.0	0.10	125.000	4.77392	60.3	55 - 105			
Copper	306.243	2.0	0.11	125.000	699.583	-315	53 - 126			M1
Lead	131.736	1.0	0.19	125.000	68.8434	50.3	34 - 129			
Molybdenum	80.9205	1.0	0.13	125.000	ND	64.7	57 - 105			
Nickel	83.1694	1.0	0.10	125.000	12.9802	56.2	49 - 109			
Selenium	80.7733	1.0	0.88	125.000	ND	64.6	57 - 99			
Silver	90.6109	1.0	0.07	125.000	ND	72.5	64 - 105			
Thallium	85.0273	1.0	0.42	125.000	ND	68.0	46 - 105			
Vanadium	95.8326	1.0	0.19	125.000	24.3298	57.2	60 - 109			M1
Zinc	245.798	1.0	0.18	125.000	266.734	-16.7	29 - 122			M1
Matrix Spike Dup (B7E0684-MSD1)			**Source: 1702036-90**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Antimony	60.3833	2.0	0.44	125.000	ND	48.3	34 - 103	9.28	20	
Arsenic	78.5422	1.0	0.70	125.000	1.19669	61.9	59 - 103	6.03	20	
Barium	151.657	1.0	0.10	125.000	124.230	21.9	30 - 134	5.21	20	M1
Beryllium	76.3472	1.0	0.04	125.000	0.280898	60.9	62 - 105	6.47	20	M1
Cadmium	83.0358	1.0	0.09	125.000	0.970588	65.7	53 - 102	5.76	20	
Chromium	75.3526	1.0	0.12	125.000	8.79547	53.2	51 - 111	6.43	20	
Cobalt	74.6237	1.0	0.10	125.000	4.77392	55.9	55 - 105	7.14	20	
Copper	528.396	2.0	0.11	125.000	699.583	-137	53 - 126	53.2	20	M1, R
Lead	135.681	1.0	0.19	125.000	68.8434	53.5	34 - 129	2.95	20	
Molybdenum	75.3647	1.0	0.13	125.000	ND	60.3	57 - 105	7.11	20	
Nickel	85.2942	1.0	0.10	125.000	12.9802	57.9	49 - 109	2.52	20	
Selenium	75.2614	1.0	0.88	125.000	ND	60.2	57 - 99	7.07	20	
Silver	88.1210	1.0	0.07	125.000	ND	70.5	64 - 105	2.79	20	
Thallium	80.4135	1.0	0.42	125.000	ND	64.3	46 - 105	5.58	20	
Vanadium	91.1784	1.0	0.19	125.000	24.3298	53.5	60 - 109	4.98	20	M1
Zinc	325.934	1.0	0.18	125.000	266.734	47.4	29 - 122	28.0	20	R

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
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TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0002 - EPA 3010A_S										
Blank (B7F0002-BLK1)					Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
Blank (B7F0002-BLK2)					Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
LCS (B7F0002-BS1)					Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	0.981408	0.050	0.0067	1.00000		98.1	80 - 120			
Barium	1.05672	0.050	0.0008	1.00000		106	80 - 120			
Cadmium	1.01051	0.050	0.0002	1.00000		101	80 - 120			
Lead	0.986376	0.050	0.0028	1.00000		98.6	80 - 120			
Duplicate (B7F0002-DUP1)			**Source: 1702036-05**		Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	ND	0.25	0.033		ND			NR	20	
Barium	0.761870	0.25	0.0040		0.779528			2.29	20	
Cadmium	0.010112	0.25	0.0008		0.010752			6.14	20	
Lead	0.245185	0.25	0.014		0.234670			4.38	20	
Duplicate (B7F0002-DUP2)			**Source: 1702036-49**		Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	ND	0.25	0.033		ND			NR	20	
Barium	0.414386	0.25	0.0040		0.449907			8.22	20	
Cadmium	0.017842	0.25	0.0008		0.019097			6.79	20	
Lead	0.212850	0.25	0.014		0.227137			6.49	20	
Matrix Spike (B7F0002-MS1)			**Source: 1702036-05**		Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	2.68881	0.25	0.033	2.50000	ND	108	74 - 123			
Barium	3.39916	0.25	0.0040	2.50000	0.779528	105	76 - 117			
Cadmium	2.59972	0.25	0.0008	2.50000	0.010752	104	73 - 115			
Lead	2.82214	0.25	0.014	2.50000	0.234670	103	78 - 109			
Matrix Spike (B7F0002-MS2)			**Source: 1702036-49**		Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	2.52402	0.25	0.033	2.50000	ND	101	74 - 123			
Barium	2.92497	0.25	0.0040	2.50000	0.449907	99.0	76 - 117			
Cadmium	2.51975	0.25	0.0008	2.50000	0.019097	100	73 - 115			
Lead	2.69674	0.25	0.014	2.50000	0.227137	98.8	78 - 109			
Matrix Spike Dup (B7F0002-MSD1)			**Source: 1702036-05**		Prepared: 6/1/2017 Analyzed: 6/1/2017					

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TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0002 - EPA 3010A_S (continued)										
Matrix Spike Dup (B7F0002-MSD1) - Continued			**Source: 1702036-05**		Prepared: 6/1/2017 Analyzed: 6/1/2017					
Arsenic	2.58049	0.25	0.033	2.50000	ND	103	74 - 123	4.11	20	
Barium	3.29171	0.25	0.0040	2.50000	0.779528	100	76 - 117	3.21	20	
Cadmium	2.52911	0.25	0.0008	2.50000	0.010752	101	73 - 115	2.75	20	
Lead	2.70506	0.25	0.014	2.50000	0.234670	98.8	78 - 109	4.24	20	

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TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0039 - EPA 3010A_S										
Blank (B7F0039-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
Blank (B7F0039-BLK2)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
LCS (B7F0039-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	0.977571	0.050	0.0067	1.00000		97.8	80 - 120			
Barium	1.01658	0.050	0.0008	1.00000		102	80 - 120			
Cadmium	0.962616	0.050	0.0002	1.00000		96.3	80 - 120			
Lead	1.01106	0.050	0.0028	1.00000		101	80 - 120			
Duplicate (B7F0039-DUP1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	ND	0.25	0.033		0.036402			NR	20	
Barium	0.149775	0.25	0.0040		0.153491			2.45	20	
Cadmium	0.001654	0.25	0.0008		0.000933			55.7	20	R
Lead	ND	0.25	0.014		ND			NR	20	
Duplicate (B7F0039-DUP2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	0.057904	0.25	0.033		0.042137			31.5	20	
Barium	0.846218	0.25	0.0040		0.873311			3.15	20	
Cadmium	0.001558	0.25	0.0008		1.3244E-3			16.2	20	
Lead	ND	0.25	0.014		ND			NR	20	
Matrix Spike (B7F0039-MS1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	2.45172	0.25	0.033	2.50000	0.036402	96.6	74 - 123			
Barium	2.54620	0.25	0.0040	2.50000	0.153491	95.7	76 - 117			
Cadmium	2.32535	0.25	0.0008	2.50000	0.000933	93.0	73 - 115			
Lead	14.7721	0.25	0.014	2.50000	ND	591	78 - 109			M1
Matrix Spike (B7F0039-MS2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	2.57287	0.25	0.033	2.50000	0.042137	101	74 - 123			
Barium	3.38545	0.25	0.0040	2.50000	0.873311	100	76 - 117			
Cadmium	2.47920	0.25	0.0008	2.50000	1.3244E-3	99.1	73 - 115			
Lead	2.45343	0.25	0.014	2.50000	ND	98.1	78 - 109			
Matrix Spike Dup (B7F0039-MSD1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					

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250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0039 - EPA 3010A_S (continued)										
Matrix Spike Dup (B7F0039-MSD1) - Continued			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	2.49366	0.25	0.033	2.50000	0.036402	98.3	74 - 123	1.70	20	
Barium	2.51892	0.25	0.0040	2.50000	0.153491	94.6	76 - 117	1.08	20	
Cadmium	2.32480	0.25	0.0008	2.50000	0.000933	93.0	73 - 115	0.0239	20	
Lead	2.35424	0.25	0.014	2.50000	ND	94.2	78 - 109	145	20	R

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
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STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0043 - STLC_S Extraction										
Blank (B7F0043-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043							
Arsenic	ND	1.0	0.13							
Barium	ND	1.0	0.016							
Cadmium	ND	1.0	0.0030							
Copper	ND	1.0	0.046							
Lead	ND	1.0	0.057							
Zinc	ND	1.0	0.041							
Blank (B7F0043-BLK2)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043							
Arsenic	ND	1.0	0.13							
Barium	ND	1.0	0.016							
Cadmium	ND	1.0	0.0030							
Copper	ND	1.0	0.046							
Lead	ND	1.0	0.057							
Zinc	ND	1.0	0.041							
LCS (B7F0043-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	1.93962			2.00000		97.0	80 - 120			
Arsenic	2.19164			2.00000		110	80 - 120			
Barium	2.01550			2.00000		101	80 - 120			
Cadmium	2.00092			2.00000		100	80 - 120			
Copper	1.90129			2.00000		95.1	80 - 120			
Lead	2.03806			2.00000		102	80 - 120			
Zinc	2.10080			2.00000		105	80 - 120			
Duplicate (B7F0043-DUP1)				**Source: 1702036-09**	Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	0.058601	2.0	0.043		0.043631			29.3	20	
Arsenic	0.265385	1.0	0.13		ND			NR	20	
Barium	4.11426	1.0	0.016		4.18302			1.66	20	
Cadmium	0.049047	1.0	0.0030		0.046537			5.25	20	
Copper	1.19828	1.0	0.046		1.23080			2.68	20	
Lead	5.78253	1.0	0.057		5.88356			1.73	20	
Zinc	3.95814	1.0	0.041		4.02034			1.56	20	
Duplicate (B7F0043-DUP2)				**Source: 1702036-50**	Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043		ND			NR	20	
Arsenic	0.159382	1.0	0.13		ND			NR	20	
Barium	1.94212	1.0	0.016		1.92973			0.640	20	
Cadmium	0.011333	1.0	0.0030		0.011059			2.44	20	
Copper	0.278968	1.0	0.046		0.277451			0.545	20	
Lead	1.86839	1.0	0.057		1.90078			1.72	20	

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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0043 - STLC_S Extraction (continued)										
Duplicate (B7F0043-DUP2) - Continued			**Source: 1702036-50**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Zinc	1.62638	1.0	0.041		1.64292			1.01	20	
Matrix Spike (B7F0043-MS1)			**Source: 1702036-09**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	2.36785			2.50000	0.043631	93.0	88 - 107			
Arsenic	2.48822			2.50000	0.131413	94.3	90 - 110			
Barium	6.33491			2.50000	4.18302	86.1	62 - 113			
Cadmium	2.41463			2.50000	0.046537	94.7	74 - 121			
Copper	3.48219			2.50000	1.23080	90.1	62 - 129			
Lead	7.89341			2.50000	5.88356	80.4	44 - 130			
Zinc	5.89735			2.50000	4.02034	75.1	34 - 149			
Matrix Spike (B7F0043-MS2)			**Source: 1702036-50**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	2.32275			2.50000	-0.301999	92.9	88 - 107			
Arsenic	2.72956			2.50000	0.115911	105	90 - 110			
Barium	4.40770			2.50000	1.92973	99.1	62 - 113			
Cadmium	2.50645			2.50000	0.011059	99.8	74 - 121			
Copper	2.70344			2.50000	0.277451	97.0	62 - 129			
Lead	4.31962			2.50000	1.90078	96.8	44 - 130			
Zinc	4.24318			2.50000	1.64292	104	34 - 149			
Matrix Spike Dup (B7F0043-MSD1)			**Source: 1702036-09**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	2.26108			2.50000	0.043631	88.7	88 - 107	4.61	20	
Arsenic	2.46448			2.50000	0.131413	93.3	90 - 110	0.959	20	
Barium	6.09402			2.50000	4.18302	76.4	62 - 113	3.88	20	
Cadmium	2.34968			2.50000	0.046537	92.1	74 - 121	2.73	20	
Copper	3.35946			2.50000	1.23080	85.1	62 - 129	3.59	20	
Lead	7.54750			2.50000	5.88356	66.6	44 - 130	4.48	20	
Zinc	5.63211			2.50000	4.02034	64.5	34 - 149	4.60	20	

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Irvine , CA 92618	Reported : 06/05/2017

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0044 - STLC_S Extraction										
Blank (B7F0044-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043							
Arsenic	ND	1.0	0.13							
Barium	ND	1.0	0.016							
Cadmium	ND	1.0	0.0030							
Copper	ND	1.0	0.046							
Lead	ND	1.0	0.057							
Zinc	ND	1.0	0.041							
Blank (B7F0044-BLK2)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043							
Arsenic	ND	1.0	0.13							
Barium	ND	1.0	0.016							
Cadmium	ND	1.0	0.0030							
Copper	ND	1.0	0.046							
Lead	ND	1.0	0.057							
Zinc	ND	1.0	0.041							
LCS (B7F0044-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	1.92359			2.00000		96.2	80 - 120			
Arsenic	2.27389			2.00000		114	80 - 120			
Barium	2.08652			2.00000		104	80 - 120			
Cadmium	2.02226			2.00000		101	80 - 120			
Copper	1.97424			2.00000		98.7	80 - 120			
Lead	2.01514			2.00000		101	80 - 120			
Zinc	2.19691			2.00000		110	80 - 120			
Duplicate (B7F0044-DUP1)				**Source: 1702036-90**	Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043		ND			NR	20	
Arsenic	0.182426	1.0	0.13		0.159525			13.4	20	
Barium	1.85356	1.0	0.016		1.85388			0.0174	20	
Cadmium	0.068198	1.0	0.0030		0.068729			0.775	20	
Copper	143.189	1.0	0.046		144.207			0.708	20	
Lead	6.47783	1.0	0.057		6.40643			1.11	20	
Zinc	58.1395	1.0	0.041		58.8438			1.20	20	
Duplicate (B7F0044-DUP2)				**Source: 1702042-07**	Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	ND	2.0	0.043		ND			NR	20	
Arsenic	0.160625	1.0	0.13		ND			NR	20	
Barium	8.96012	1.0	0.016		10.5356			16.2	20	
Cadmium	0.012736	1.0	0.0030		0.015005			16.4	20	
Copper	0.230261	1.0	0.046		0.306079			28.3	20	R
Lead	0.914441	1.0	0.057		1.04848			13.7	20	

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0044 - STLC_S Extraction (continued)										
Duplicate (B7F0044-DUP2) - Continued			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Zinc	0.465377	1.0	0.041		0.547340			16.2	20	
Matrix Spike (B7F0044-MS1)			**Source: 1702036-90**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	2.45530			2.50000	-0.054738	98.2	88 - 107			
Arsenic	2.77419			2.50000	0.159525	105	90 - 110			
Barium	4.14656			2.50000	1.85388	91.7	62 - 113			
Cadmium	2.44374			2.50000	0.068729	95.0	74 - 121			
Copper	132.861			2.50000	144.207	-454	62 - 129			M1
Lead	8.22113			2.50000	6.40643	72.6	44 - 130			
Zinc	56.2382			2.50000	58.8438	-104	34 - 149			
Matrix Spike (B7F0044-MS2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	2.11574			2.50000	-0.055379	84.6	88 - 107			M1
Arsenic	2.25087			2.50000	0.127676	84.9	90 - 110			
Barium	10.5416			2.50000	10.5356	0.239	62 - 113			
Cadmium	2.22380			2.50000	0.015005	88.4	74 - 121			
Copper	2.33211			2.50000	0.306079	81.0	62 - 129			
Lead	3.05398			2.50000	1.04848	80.2	44 - 130			
Zinc	2.69638			2.50000	0.547340	86.0	34 - 149			
Matrix Spike Dup (B7F0044-MSD1)			**Source: 1702036-90**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Antimony	2.59215			2.50000	-0.054738	104	88 - 107	5.42	20	
Arsenic	2.83846			2.50000	0.159525	107	90 - 110	2.29	20	
Barium	4.36922			2.50000	1.85388	101	62 - 113	5.23	20	
Cadmium	2.60559			2.50000	0.068729	101	74 - 121	6.41	20	
Copper	145.896			2.50000	144.207	67.5	62 - 129	9.35	20	
Lead	8.86890			2.50000	6.40643	98.5	44 - 130	7.58	20	
Zinc	60.2816			2.50000	58.8438	57.5	34 - 149	6.94	20	

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Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
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Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0053 - EPA 3060A_S (WC)										
Blank (B7F0053-BLK1)					Prepared: 6/1/2017 Analyzed: 6/2/2017					
Hexavalent Chromium	ND	1.0	0.30							
LCS (B7F0053-BS1)					Prepared: 6/1/2017 Analyzed: 6/2/2017					
Hexavalent Chromium	45.8000	1.0	0.30	50.0000		91.6	80 - 120			
Matrix Spike (B7F0053-MS1)			**Source: 1702036-03**		Prepared: 6/1/2017 Analyzed: 6/2/2017					
Hexavalent Chromium	46.7000	1.0	0.30	50.0000	ND	93.4	75 - 125			
Matrix Spike (B7F0053-MS2)			**Source: 1702036-03**		Prepared: 6/1/2017 Analyzed: 6/2/2017					
Hexavalent Chromium	2275.00	50	15	1608.00	ND	141	75 - 125			M2
Matrix Spike Dup (B7F0053-MSD1)			**Source: 1702036-03**		Prepared: 6/1/2017 Analyzed: 6/2/2017					
Hexavalent Chromium	45.2000	1.0	0.30	50.0000	ND	90.4	75 - 125	3.26	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0674 - EPA 7471_S										
Blank (B7E0674-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	ND	0.10	0.005							
LCS (B7E0674-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.837335	0.10	0.005	0.833333		100	80 - 120			
Duplicate (B7E0674-DUP1)			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.046820	0.10	0.005		0.042672			9.27	20	
Matrix Spike (B7E0674-MS1)			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.909317	0.10	0.005	0.833333	0.042672	104	70 - 130			
Matrix Spike Dup (B7E0674-MSD1)			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.917531	0.10	0.005	0.833333	0.042672	105	70 - 130	0.899	20	
Post Spike (B7E0674-PS1)			**Source: 1702018-85**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.005690			5.00000E-3	0.000512	104	85 - 115			

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0675 - EPA 7471_S										
Blank (B7E0675-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	ND	0.10	0.005							
LCS (B7E0675-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.882702	0.10	0.005	0.833333		106	80 - 120			
Matrix Spike (B7E0675-MS1)			**Source: 1702036-10**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	1.13338	0.10	0.005	0.833333	0.201663	112	70 - 130			
Matrix Spike Dup (B7E0675-MSD1)			**Source: 1702036-10**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	1.26230	0.10	0.005	0.833333	0.201663	127	70 - 130	10.8	20	
Post Spike (B7E0675-PS1)			**Source: 1702036-10**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.008451			5.00000E-3	0.002420	121	85 - 115			M1

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0676 - EPA 7471_S										
Blank (B7E0676-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	ND	0.10	0.005							
LCS (B7E0676-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.814870	0.10	0.005	0.833333		97.8	80 - 120			
Matrix Spike (B7E0676-MS1)			**Source: 1702036-30**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.985742	0.10	0.005	0.833333	0.076126	109	70 - 130			
Matrix Spike Dup (B7E0676-MSD1)			**Source: 1702036-30**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.913099	0.10	0.005	0.833333	0.076126	100	70 - 130	7.65	20	
Post Spike (B7E0676-PS1)			**Source: 1702036-30**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.006353			5.00000E-3	0.000914	109	85 - 115			

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0677 - EPA 7471_S										
Blank (B7E0677-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	ND	0.10	0.005							
LCS (B7E0677-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.968587	0.10	0.005	0.833333		116	80 - 120			
Matrix Spike (B7E0677-MS1)			**Source: 1702036-50**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	1.04892	0.10	0.005	0.833333	0.059099	119	70 - 130			
Matrix Spike Dup (B7E0677-MSD1)			**Source: 1702036-50**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	1.01616	0.10	0.005	0.833333	0.059099	115	70 - 130	3.17	20	
Post Spike (B7E0677-PS1)			**Source: 1702036-50**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.007350			5.00000E-3	0.000709	133	85 - 115			M1

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0678 - EPA 7471_S										
Blank (B7E0678-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	ND	0.10	0.005							
LCS (B7E0678-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.825445	0.10	0.005	0.833333		99.1	80 - 120			
Matrix Spike (B7E0678-MS1)			**Source: 1702036-70**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.878832	0.10	0.005	0.833333	0.038678	101	70 - 130			
Matrix Spike Dup (B7E0678-MSD1)			**Source: 1702036-70**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.881392	0.10	0.005	0.833333	0.038678	101	70 - 130	0.291	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0679 - EPA 7471_S										
Blank (B7E0679-BLK1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	ND	0.10	0.005							
LCS (B7E0679-BS1)					Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.906104	0.10	0.005	0.833333		109	80 - 120			
Matrix Spike (B7E0679-MS1)			**Source: 1702036-87**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.978608	0.10	0.005	0.833333	0.090695	107	70 - 130			
Matrix Spike Dup (B7E0679-MSD1)			**Source: 1702036-87**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	1.13385	0.10	0.005	0.833333	0.090695	125	70 - 130	14.7	20	
Post Spike (B7E0679-PS1)			**Source: 1702036-87**		Prepared: 5/20/2017 Analyzed: 5/22/2017					
Mercury	0.007250			5.00000E-3	0.001088	123	85 - 115			M1

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STLC Mercury by AA (Cold Vapor) EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0046 - EPA 245.1/7470_S										
Blank (B7F0046-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	ND	0.20	0.05							
LCS (B7F0046-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	10.0501	0.20	0.05	10.0000		101	80 - 120			
Duplicate (B7F0046-DUP1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	ND	1.0	0.23		ND			NR	20	
Matrix Spike (B7F0046-MS1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	41.3768	1.0	0.23	50.0000	ND	82.8	70 - 130			
Matrix Spike Dup (B7F0046-MSD1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	42.3072	1.0	0.23	50.0000	ND	84.6	70 - 130	2.22	20	
Post Spike (B7F0046-PS1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	5.16692			5.00000	0.004793	103	85 - 115			

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TCLP Mercury by AA (Cold Vapor) by EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0049 - EPA 245.1/7470_S										
Blank (B7F0049-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	ND	0.20	0.05							
LCS (B7F0049-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	10.4711	0.20	0.05	10.0000		105	80 - 120			
Duplicate (B7F0049-DUP1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	ND	0.20	0.05		ND			NR	20	
Matrix Spike (B7F0049-MS1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	10.7772	0.20	0.05	10.0000	ND	108	70 - 130			
Matrix Spike Dup (B7F0049-MSD1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	10.3981	0.20	0.05	10.0000	ND	104	70 - 130	3.58	20	
Post Spike (B7F0049-PS1)			**Source: 1702036-84**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Mercury	5.49955			5.00000	0.004793	110	85 - 115			

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Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0622 - GCVOA_S										
Blank (B7E0622-BLK1)						Prepared: 5/19/2017 Analyzed: 5/19/2017				
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.1925*			*0.200000*		*96.3*	*36 - 125*			
LCS (B7E0622-BS1)						Prepared: 5/19/2017 Analyzed: 5/19/2017				
Gasoline Range Organics	5.03600	1.0	0.20	5.00000		101	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1895*			*0.200000*		*94.8*	*36 - 125*			
Matrix Spike (B7E0622-MS1)			**Source: 1702063-04**			Prepared: 5/19/2017 Analyzed: 5/19/2017				
Gasoline Range Organics	4.76300	1.0	0.20	5.00000	ND	95.3	32 - 161			
Surrogate: 4-Bromofluorobenzene	*0.2039*			*0.200000*		*102*	*36 - 125*			
Matrix Spike Dup (B7E0622-MSD1)			**Source: 1702063-04**			Prepared: 5/19/2017 Analyzed: 5/19/2017				
Gasoline Range Organics	4.54900	1.0	0.20	5.00000	ND	91.0	32 - 161	4.60	20	
Surrogate: 4-Bromofluorobenzene	*0.2024*			*0.200000*		*101*	*36 - 125*			

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Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0657 - GCVOA_S										
Blank (B7E0657-BLK1)					Prepared: 5/21/2017 Analyzed: 5/21/2017					
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.1961*			*0.200000*		*98.0*	*36 - 125*			
LCS (B7E0657-BS1)					Prepared: 5/21/2017 Analyzed: 5/21/2017					
Gasoline Range Organics	5.04800	1.0	0.20	5.00000		101	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1997*			*0.200000*		*99.8*	*36 - 125*			
Duplicate (B7E0657-DUP1)			**Source: 1701999-01**		Prepared: 5/21/2017 Analyzed: 5/21/2017					
Gasoline Range Organics	ND	1.0	0.20		ND			NR	20	
Surrogate: 4-Bromofluorobenzene	*0.2096*			*0.200000*		*105*	*36 - 125*			
Matrix Spike (B7E0657-MS1)			**Source: 1701999-01**		Prepared: 5/21/2017 Analyzed: 5/21/2017					
Gasoline Range Organics	4.50100	1.0	0.20	5.00000	ND	90.0	32 - 161			
Surrogate: 4-Bromofluorobenzene	*0.2103*			*0.200000*		*105*	*36 - 125*			
Matrix Spike Dup (B7E0657-MSD1)			**Source: 1701999-01**		Prepared: 5/21/2017 Analyzed: 5/21/2017					
Gasoline Range Organics	4.36600	1.0	0.20	5.00000	ND	87.3	32 - 161	3.04	20	
Surrogate: 4-Bromofluorobenzene	*0.2064*			*0.200000*		*103*	*36 - 125*			

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Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0718 - GCVOA_S										
Blank (B7E0718-BLK1)						Prepared: 5/22/2017 Analyzed: 5/22/2017				
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.1977*			*0.200000*		*98.9*	*36 - 125*			
LCS (B7E0718-BS1)						Prepared: 5/22/2017 Analyzed: 5/22/2017				
Gasoline Range Organics	5.23100	1.0	0.20	5.00000		105	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1996*			*0.200000*		*99.8*	*36 - 125*			
Matrix Spike (B7E0718-MS1)			**Source: 1702036-22**			Prepared: 5/22/2017 Analyzed: 5/22/2017				
Gasoline Range Organics	4.52300	1.0	0.20	5.00000	ND	90.5	32 - 161			
Surrogate: 4-Bromofluorobenzene	*0.2036*			*0.200000*		*102*	*36 - 125*			
Matrix Spike Dup (B7E0718-MSD1)			**Source: 1702036-22**			Prepared: 5/22/2017 Analyzed: 5/22/2017				
Gasoline Range Organics	4.72900	1.0	0.20	5.00000	ND	94.6	32 - 161	4.45	20	
Surrogate: 4-Bromofluorobenzene	*0.2002*			*0.200000*		*100*	*36 - 125*			

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Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0721 - GCVOA_S										
Blank (B7E0721-BLK1)					Prepared: 5/22/2017 Analyzed: 5/22/2017					
Gasoline Range Organics	ND	1.0	0.20							
Surrogate: 4-Bromofluorobenzene	*0.2009*			*0.200000*		*100*	*36 - 125*			
LCS (B7E0721-BS1)					Prepared: 5/22/2017 Analyzed: 5/22/2017					
Gasoline Range Organics	4.93400	1.0	0.20	5.00000		98.7	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1897*			*0.200000*		*94.8*	*36 - 125*			
Matrix Spike (B7E0721-MS1)			**Source: 1702096-01**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
Gasoline Range Organics	4.65500	1.0	0.20	5.00000	ND	93.1	32 - 161			
Surrogate: 4-Bromofluorobenzene	*0.2097*			*0.200000*		*105*	*36 - 125*			
Matrix Spike Dup (B7E0721-MSD1)			**Source: 1702096-01**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
Gasoline Range Organics	4.71700	1.0	0.20	5.00000	ND	94.3	32 - 161	1.32	20	
Surrogate: 4-Bromofluorobenzene	*0.2089*			*0.200000*		*104*	*36 - 125*			

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Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0785 - GCSEMI_DRO_S										
Blank (B7E0785-BLK1)						Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	ND	10	10							
Surrogate: p-Terphenyl	*61.94*			*80.0000*		*77.4*	*47 - 157*			
LCS (B7E0785-BS1)						Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	1056.04	10	10	1000.00		106	36 - 164			
Surrogate: p-Terphenyl	*59.76*			*80.0000*		*74.7*	*47 - 157*			
Matrix Spike (B7E0785-MS1)			**Source: 1702036-71**			Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	939.750	10	10	1000.00	ND	94.0	21 - 179			
Surrogate: p-Terphenyl	*59.12*			*80.0000*		*73.9*	*47 - 157*			
Matrix Spike Dup (B7E0785-MSD1)			**Source: 1702036-71**			Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	1021.15	10	10	1000.00	ND	102	21 - 179	8.30	20	
Surrogate: p-Terphenyl	*56.85*			*80.0000*		*71.1*	*47 - 157*			

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Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0786 - GCSEMI_DRO_S										
Blank (B7E0786-BLK1)						Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	ND	10	10							
Surrogate: p-Terphenyl	*61.08*			*80.0000*		*76.4*	*47 - 157*			
LCS (B7E0786-BS1)						Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	1157.65	10	10	1000.00		116	36 - 164			
Surrogate: p-Terphenyl	*63.13*			*80.0000*		*78.9*	*47 - 157*			
Matrix Spike (B7E0786-MS1)			**Source: 1702047-02**			Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	997.170	10	10	1000.00		99.7	21 - 179			
Surrogate: p-Terphenyl	*57.11*			*80.0000*		*71.4*	*47 - 157*			
Matrix Spike Dup (B7E0786-MSD1)			**Source: 1702047-02**			Prepared: 5/23/2017 Analyzed: 5/24/2017				
DRO	978.600	10	10	1000.00		97.9	21 - 179	1.88	20	
Surrogate: p-Terphenyl	*62.64*			*80.0000*		*78.3*	*47 - 157*			

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Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0750 - GCSEMI_PCB/PEST_S										
Blank (B7E0750-BLK1)										Prepared: 5/22/2017 Analyzed: 5/23/2017
4,4´-DDD	ND	2.0	0.22							
4,4´-DDD [2C]	ND	2.0	0.22							
4,4´-DDE	ND	2.0	0.20							
4,4´-DDE [2C]	ND	2.0	0.20							
4,4´-DDT	ND	2.0	0.13							
4,4´-DDT [2C]	ND	2.0	0.13							
Aldrin	ND	1.0	0.27							
Aldrin [2C]	ND	1.0	0.27							
alpha-BHC	ND	1.0	0.20							
alpha-BHC [2C]	ND	1.0	0.20							
alpha-Chlordane	ND	1.0	0.21							
alpha-Chlordane [2C]	ND	1.0	0.21							
beta-BHC	ND	1.0	0.23							
beta-BHC [2C]	ND	1.0	0.23							
Chlordane	ND	8.5	0.90							
Chlordane [2C]	ND	8.5	0.90							
delta-BHC	ND	1.0	0.21							
delta-BHC [2C]	ND	1.0	0.21							
Dieldrin	ND	2.0	0.25							
Dieldrin [2C]	ND	2.0	0.25							
Endosulfan I	ND	1.0	0.21							
Endosulfan I [2C]	ND	1.0	0.21							
Endosulfan II	ND	2.0	0.22							
Endosulfan II [2C]	ND	2.0	0.22							
Endosulfan sulfate	ND	2.0	0.21							
Endosulfan Sulfate [2C]	ND	2.0	0.21							
Endrin	ND	2.0	0.23							
Endrin [2C]	ND	2.0	0.23							
Endrin aldehyde	ND	2.0	0.28							
Endrin aldehyde [2C]	ND	2.0	0.28							
Endrin ketone	ND	2.0	0.20							
Endrin ketone [2C]	ND	2.0	0.20							
gamma-BHC	ND	1.0	0.20							
gamma-BHC [2C]	ND	1.0	0.20							
gamma-Chlordane	ND	1.0	0.23							
gamma-Chlordane [2C]	ND	1.0	0.23							
Heptachlor	ND	1.0	0.19							
Heptachlor [2C]	ND	1.0	0.19							
Heptachlor epoxide	ND	1.0	0.20							
Heptachlor epoxide [2C]	ND	1.0	0.20							
Methoxychlor	ND	5.0	0.18							

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0750 - GCSEMI_PCB/PEST_S (continued)										
Blank (B7E0750-BLK1) - Continued					Prepared: 5/22/2017 Analyzed: 5/23/2017					
Methoxychlor [2C]	ND	5.0	0.18							
Toxaphene	ND	50	8.2							
Toxaphene [2C]	ND	50	8.2							
Surrogate: Decachlorobiphenyl	*17.18*			*16.6667*		*103*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*16.92*			*16.6667*		*102*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*20.20*			*16.6667*		*121*	*26 - 108*			S12
Surrogate: Tetrachloro-m-xylene	*20.46*			*16.6667*		*123*	*26 - 108*			S12
LCS (B7E0750-BS1)					Prepared: 5/22/2017 Analyzed: 5/23/2017					
4,4´-DDD	18.3560	2.0	0.22	16.6667		110	53 - 125			
4,4´-DDD [2C]	18.0138	2.0	0.22	16.6667		108	53 - 125			
4,4´-DDE	19.2420	2.0	0.20	16.6667		115	54 - 113			L3
4,4´-DDE [2C]	18.3557	2.0	0.20	16.6667		110	54 - 113			
4,4´-DDT	12.5112	2.0	0.13	16.6667		75.1	25 - 127			
4,4´-DDT [2C]	12.4688	2.0	0.13	16.6667		74.8	25 - 127			
Aldrin	17.5808	1.0	0.27	16.6667		105	59 - 107			
Aldrin [2C]	17.8332	1.0	0.27	16.6667		107	59 - 107			
alpha-BHC	17.9637	1.0	0.20	16.6667		108	59 - 104			L3
alpha-BHC [2C]	17.8773	1.0	0.20	16.6667		107	59 - 104			L3
alpha-Chlordane	18.4937	1.0	0.21	16.6667		111	54 - 110			L3
alpha-Chlordane [2C]	17.9837	1.0	0.21	16.6667		108	54 - 110			
beta-BHC	18.1288	1.0	0.23	16.6667		109	57 - 103			L3
beta-BHC [2C]	18.5023	1.0	0.23	16.6667		111	57 - 103			L3
delta-BHC	16.8458	1.0	0.21	16.6667		101	16 - 120			
delta-BHC [2C]	17.0500	1.0	0.21	16.6667		102	16 - 120			
Dieldrin	17.9055	2.0	0.25	16.6667		107	61 - 109			
Dieldrin [2C]	17.1080	2.0	0.25	16.6667		103	61 - 109			
Endosulfan I	17.8248	1.0	0.21	16.6667		107	60 - 106			L3
Endosulfan I [2C]	17.3892	1.0	0.21	16.6667		104	60 - 106			
Endosulfan II	18.8545	2.0	0.22	16.6667		113	59 - 108			L3
Endosulfan II [2C]	17.6848	2.0	0.22	16.6667		106	59 - 108			
Endosulfan sulfate	17.1075	2.0	0.21	16.6667		103	54 - 110			
Endosulfan Sulfate [2C]	16.2450	2.0	0.21	16.6667		97.5	54 - 110			
Endrin	19.6777	2.0	0.23	16.6667		118	63 - 112			L3
Endrin [2C]	19.6563	2.0	0.23	16.6667		118	63 - 112			L3
Endrin aldehyde	17.4123	2.0	0.28	16.6667		104	64 - 119			
Endrin aldehyde [2C]	17.5048	2.0	0.28	16.6667		105	64 - 119			
Endrin ketone	13.8858	2.0	0.20	16.6667		83.3	54 - 115			
Endrin ketone [2C]	13.1892	2.0	0.20	16.6667		79.1	54 - 115			
gamma-BHC	17.4703	1.0	0.20	16.6667		105	60 - 107			
gamma-BHC [2C]	17.4957	1.0	0.20	16.6667		105	60 - 107			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0750 - GCSEMI_PCB/PEST_S (continued)										
LCS (B7E0750-BS1) - Continued						Prepared: 5/22/2017 Analyzed: 5/23/2017				
gamma-Chlordane	17.6033	1.0	0.23	16.6667		106	57 - 106			
gamma-Chlordane [2C]	17.6135	1.0	0.23	16.6667		106	57 - 106			
Heptachlor	15.8130	1.0	0.19	16.6667		94.9	54 - 114			
Heptachlor [2C]	16.1553	1.0	0.19	16.6667		96.9	54 - 114			
Heptachlor epoxide	17.0022	1.0	0.20	16.6667		102	61 - 106			
Heptachlor epoxide [2C]	17.0738	1.0	0.20	16.6667		102	61 - 106			
Methoxychlor	11.4545	5.0	0.18	16.6667		68.7	18 - 138			
Methoxychlor [2C]	12.0663	5.0	0.18	16.6667		72.4	18 - 138			
Surrogate: Decachlorobiphenyl	*15.80*			*16.6667*		*94.8*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*16.25*			*16.6667*		*97.5*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*18.26*			*16.6667*		*110*	*26 - 108*			S12
Surrogate: Tetrachloro-m-xylene	*24.39*			*16.6667*		*146*	*26 - 108*			S5
Matrix Spike (B7E0750-MS1)			**Source: 1702036-22**			Prepared: 5/22/2017 Analyzed: 5/23/2017				
4,4´-DDD	10.4885	2.0	0.22	16.6667	ND	62.9	25 - 141			
4,4´-DDD [2C]	10.9330	2.0	0.22	16.6667	ND	65.6	25 - 141			
4,4´-DDE	19.8625	2.0	0.20	16.6667	ND	119	22 - 141			
4,4´-DDE [2C]	19.4490	2.0	0.20	16.6667	ND	117	22 - 141			
4,4´-DDT	10.4398	2.0	0.13	16.6667	ND	62.6	15 - 136			
4,4´-DDT [2C]	10.9037	2.0	0.13	16.6667	ND	65.4	15 - 136			
Aldrin	9.99083	1.0	0.27	16.6667	ND	59.9	33 - 118			
Aldrin [2C]	10.4717	1.0	0.27	16.6667	ND	62.8	33 - 118			
alpha-BHC	8.29500	1.0	0.20	16.6667	ND	49.8	30 - 116			
alpha-BHC [2C]	8.67100	1.0	0.20	16.6667	ND	52.0	30 - 116			
alpha-Chlordane	9.13067	1.0	0.21	16.6667	ND	54.8	30 - 123			
alpha-Chlordane [2C]	9.29050	1.0	0.21	16.6667	ND	55.7	30 - 123			
beta-BHC	5.58017	1.0	0.23	16.6667	ND	33.5	24 - 121			
beta-BHC [2C]	6.00983	1.0	0.23	16.6667	ND	36.1	24 - 121			
delta-BHC	2.81917	1.0	0.21	16.6667	ND	16.9	7 - 120			
delta-BHC [2C]	3.14383	1.0	0.21	16.6667	ND	18.9	7 - 120			
Dieldrin	4.45417	2.0	0.25	16.6667	ND	26.7	25 - 136			
Dieldrin [2C]	4.47417	2.0	0.25	16.6667	ND	26.8	25 - 136			
Endosulfan I	5.58583	1.0	0.21	16.6667	ND	33.5	18 - 134			
Endosulfan I [2C]	5.72767	1.0	0.21	16.6667	ND	34.4	18 - 134			
Endosulfan II	2.03983	2.0	0.22	16.6667	ND	12.2	28 - 128			M2
Endosulfan II [2C]	1.62050	2.0	0.22	16.6667	ND	9.72	28 - 128			M2
Endosulfan sulfate	1.15150	2.0	0.21	16.6667	ND	6.91	5 - 145			
Endosulfan Sulfate [2C]	1.13217	2.0	0.21	16.6667	ND	6.79	5 - 145			
Endrin	4.94550	2.0	0.23	16.6667	ND	29.7	26 - 142			
Endrin [2C]	5.31117	2.0	0.23	16.6667	ND	31.9	26 - 142			
Endrin aldehyde	1.07917	2.0	0.28	16.6667	ND	6.48	8 - 146			M2

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0750 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike (B7E0750-MS1) - Continued			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/23/2017					
Endrin aldehyde [2C]	1.22133	2.0	0.28	16.6667	ND	7.33	8 - 146			M2
Endrin ketone	0.996667	2.0	0.20	16.6667	ND	5.98	16 - 139			M2
Endrin ketone [2C]	1.11533	2.0	0.20	16.6667	ND	6.69	16 - 139			M2
gamma-BHC	7.12517	1.0	0.20	16.6667	ND	42.8	30 - 122			
gamma-BHC [2C]	7.57867	1.0	0.20	16.6667	ND	45.5	30 - 122			
gamma-Chlordane	8.48667	1.0	0.23	16.6667	ND	50.9	18 - 132			
gamma-Chlordane [2C]	8.45417	1.0	0.23	16.6667	ND	50.7	18 - 132			
Heptachlor	8.79300	1.0	0.19	16.6667	ND	52.8	34 - 122			
Heptachlor [2C]	9.57100	1.0	0.19	16.6667	ND	57.4	34 - 122			
Heptachlor epoxide	5.79067	1.0	0.20	16.6667	ND	34.7	21 - 135			
Heptachlor epoxide [2C]	6.60067	1.0	0.20	16.6667	ND	39.6	21 - 135			
Methoxychlor	1.65250	5.0	0.18	16.6667	ND	9.91	8 - 162			
Methoxychlor [2C]	2.05733	5.0	0.18	16.6667	ND	12.3	8 - 162			
Surrogate: Decachlorobiphenyl	*9.493*			*16.6667*		*57.0*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*10.48*			*16.6667*		*62.9*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*11.09*			*16.6667*		*66.5*	*26 - 108*			
Surrogate: Tetrachloro-m-xylene	*12.04*			*16.6667*		*72.3*	*26 - 108*			
Matrix Spike Dup (B7E0750-MSD1)			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/23/2017					
4,4´-DDD	10.2992	2.0	0.22	16.6667	ND	61.8	25 - 141	1.82	20	
4,4´-DDD [2C]	10.8712	2.0	0.22	16.6667	ND	65.2	25 - 141	0.567	20	
4,4´-DDE	20.6377	2.0	0.20	16.6667	ND	124	22 - 141	3.83	20	
4,4´-DDE [2C]	20.3920	2.0	0.20	16.6667	ND	122	22 - 141	4.73	20	
4,4´-DDT	10.7368	2.0	0.13	16.6667	ND	64.4	15 - 136	2.80	20	
4,4´-DDT [2C]	11.2125	2.0	0.13	16.6667	ND	67.3	15 - 136	2.79	20	
Aldrin	10.4763	1.0	0.27	16.6667	ND	62.9	33 - 118	4.74	20	
Aldrin [2C]	11.0982	1.0	0.27	16.6667	ND	66.6	33 - 118	5.81	20	
alpha-BHC	8.58250	1.0	0.20	16.6667	ND	51.5	30 - 116	3.41	20	
alpha-BHC [2C]	8.89633	1.0	0.20	16.6667	ND	53.4	30 - 116	2.57	20	
alpha-Chlordane	9.20617	1.0	0.21	16.6667	ND	55.2	30 - 123	0.823	20	
alpha-Chlordane [2C]	9.45000	1.0	0.21	16.6667	ND	56.7	30 - 123	1.70	20	
beta-BHC	5.22650	1.0	0.23	16.6667	ND	31.4	24 - 121	6.55	20	
beta-BHC [2C]	5.59967	1.0	0.23	16.6667	ND	33.6	24 - 121	7.07	20	
delta-BHC	2.07767	1.0	0.21	16.6667	ND	12.5	7 - 120	30.3	20	R
delta-BHC [2C]	2.39083	1.0	0.21	16.6667	ND	14.3	7 - 120	27.2	20	
Dieldrin	3.66050	2.0	0.25	16.6667	ND	22.0	25 - 136	19.6	20	M2
Dieldrin [2C]	3.71950	2.0	0.25	16.6667	ND	22.3	25 - 136	18.4	20	M2
Endosulfan I	4.96767	1.0	0.21	16.6667	ND	29.8	18 - 134	11.7	20	
Endosulfan I [2C]	5.13650	1.0	0.21	16.6667	ND	30.8	18 - 134	10.9	20	
Endosulfan II	1.40933	2.0	0.22	16.6667	ND	8.46	28 - 128	36.6	20	M2, R
Endosulfan II [2C]	0.959333	2.0	0.22	16.6667	ND	5.76	28 - 128	51.3	20	M2, R

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0750 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike Dup (B7E0750-MSD1) - Continued			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/23/2017					
Endosulfan sulfate	0.617333	2.0	0.21	16.6667	ND	3.70	5 - 145	60.4	20	M2, R
Endosulfan Sulfate [2C]	0.623500	2.0	0.21	16.6667	ND	3.74	5 - 145	57.9	20	M2, R
Endrin	4.11617	2.0	0.23	16.6667	ND	24.7	26 - 142	18.3	20	M2
Endrin [2C]	4.50733	2.0	0.23	16.6667	ND	27.0	26 - 142	16.4	20	
Endrin aldehyde	0.614167	2.0	0.28	16.6667	ND	3.68	8 - 146	54.9	20	M2, R
Endrin aldehyde [2C]	0.667000	2.0	0.28	16.6667	ND	4.00	8 - 146	58.7	20	M2, R
Endrin ketone	0.556833	2.0	0.20	16.6667	ND	3.34	16 - 139	56.6	20	M2, R
Endrin ketone [2C]	0.643833	2.0	0.20	16.6667	ND	3.86	16 - 139	53.6	20	M2, R
gamma-BHC	7.01683	1.0	0.20	16.6667	ND	42.1	30 - 122	1.53	20	
gamma-BHC [2C]	7.49283	1.0	0.20	16.6667	ND	45.0	30 - 122	1.14	20	
gamma-Chlordane	8.44667	1.0	0.23	16.6667	ND	50.7	18 - 132	0.472	20	
gamma-Chlordane [2C]	8.45867	1.0	0.23	16.6667	ND	50.8	18 - 132	0.0532	20	
Heptachlor	9.20083	1.0	0.19	16.6667	ND	55.2	34 - 122	4.53	20	
Heptachlor [2C]	10.1585	1.0	0.19	16.6667	ND	61.0	34 - 122	5.96	20	
Heptachlor epoxide	5.27883	1.0	0.20	16.6667	ND	31.7	21 - 135	9.25	20	
Heptachlor epoxide [2C]	6.17433	1.0	0.20	16.6667	ND	37.0	21 - 135	6.67	20	
Methoxychlor	1.04167	5.0	0.18	16.6667	ND	6.25	8 - 162	45.3	20	M2, R
Methoxychlor [2C]	1.39933	5.0	0.18	16.6667	ND	8.40	8 - 162	38.1	20	R
Surrogate: Decachlorobiphenyl	*9.873*			*16.6667*		*59.2*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*10.97*			*16.6667*		*65.8*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*11.86*			*16.6667*		*71.2*	*26 - 108*			
Surrogate: Tetrachloro-m-xylene	*12.84*			*16.6667*		*77.0*	*26 - 108*			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0819 - GCSEMI_PCB/PEST_S										
Blank (B7E0819-BLK1)							Prepared: 5/24/2017 Analyzed: 5/24/2017			
4,4´-DDD	ND	2.0	0.22							
4,4´-DDD [2C]	ND	2.0	0.22							
4,4´-DDE	ND	2.0	0.20							
4,4´-DDE [2C]	ND	2.0	0.20							
4,4´-DDT	ND	2.0	0.13							
4,4´-DDT [2C]	ND	2.0	0.13							
Aldrin	ND	1.0	0.27							
Aldrin [2C]	ND	1.0	0.27							
alpha-BHC	ND	1.0	0.20							
alpha-BHC [2C]	ND	1.0	0.20							
alpha-Chlordane	ND	1.0	0.21							
alpha-Chlordane [2C]	ND	1.0	0.21							
beta-BHC	ND	1.0	0.23							
beta-BHC [2C]	ND	1.0	0.23							
Chlordane	ND	8.5	0.90							
Chlordane [2C]	ND	8.5	0.90							
delta-BHC	ND	1.0	0.21							
delta-BHC [2C]	ND	1.0	0.21							
Dieldrin	ND	2.0	0.25							
Dieldrin [2C]	ND	2.0	0.25							
Endosulfan I	ND	1.0	0.21							
Endosulfan I [2C]	ND	1.0	0.21							
Endosulfan II	ND	2.0	0.22							
Endosulfan II [2C]	ND	2.0	0.22							
Endosulfan sulfate	ND	2.0	0.21							
Endosulfan Sulfate [2C]	ND	2.0	0.21							
Endrin	ND	2.0	0.23							
Endrin [2C]	ND	2.0	0.23							
Endrin aldehyde	ND	2.0	0.28							
Endrin aldehyde [2C]	ND	2.0	0.28							
Endrin ketone	ND	2.0	0.20							
Endrin ketone [2C]	ND	2.0	0.20							
gamma-BHC	ND	1.0	0.20							
gamma-BHC [2C]	ND	1.0	0.20							
gamma-Chlordane	ND	1.0	0.23							
gamma-Chlordane [2C]	ND	1.0	0.23							
Heptachlor	ND	1.0	0.19							
Heptachlor [2C]	ND	1.0	0.19							
Heptachlor epoxide	ND	1.0	0.20							
Heptachlor epoxide [2C]	ND	1.0	0.20							
Methoxychlor	ND	5.0	0.18							

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0819 - GCSEMI_PCB/PEST_S (continued)										
Blank (B7E0819-BLK1) - Continued					Prepared: 5/24/2017 Analyzed: 5/24/2017					
Methoxychlor [2C]	ND	5.0	0.18							
Toxaphene	ND	50	8.2							
Toxaphene [2C]	ND	50	8.2							
Surrogate: Decachlorobiphenyl	*14.00*			*16.6667*		*84.0*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*15.06*			*16.6667*		*90.3*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*17.62*			*16.6667*		*106*	*26 - 108*			
Surrogate: Tetrachloro-m-xylene	*18.04*			*16.6667*		*108*	*26 - 108*			
LCS (B7E0819-BS1)					Prepared: 5/24/2017 Analyzed: 5/24/2017					
4,4´-DDD	14.9642	2.0	0.22	16.6667		89.8	53 - 125			
4,4´-DDD [2C]	15.1600	2.0	0.22	16.6667		91.0	53 - 125			
4,4´-DDE	14.8060	2.0	0.20	16.6667		88.8	54 - 113			
4,4´-DDE [2C]	14.5502	2.0	0.20	16.6667		87.3	54 - 113			
4,4´-DDT	7.05117	2.0	0.13	16.6667		42.3	25 - 127			
4,4´-DDT [2C]	7.30350	2.0	0.13	16.6667		43.8	25 - 127			
Aldrin	14.0788	1.0	0.27	16.6667		84.5	59 - 107			
Aldrin [2C]	14.4073	1.0	0.27	16.6667		86.4	59 - 107			
alpha-BHC	14.3227	1.0	0.20	16.6667		85.9	59 - 104			
alpha-BHC [2C]	14.4075	1.0	0.20	16.6667		86.4	59 - 104			
alpha-Chlordane	14.4215	1.0	0.21	16.6667		86.5	54 - 110			
alpha-Chlordane [2C]	14.3808	1.0	0.21	16.6667		86.3	54 - 110			
beta-BHC	14.1683	1.0	0.23	16.6667		85.0	57 - 103			
beta-BHC [2C]	15.4288	1.0	0.23	16.6667		92.6	57 - 103			
delta-BHC	12.7328	1.0	0.21	16.6667		76.4	16 - 120			
delta-BHC [2C]	12.9925	1.0	0.21	16.6667		78.0	16 - 120			
Dieldrin	14.3892	2.0	0.25	16.6667		86.3	61 - 109			
Dieldrin [2C]	13.9312	2.0	0.25	16.6667		83.6	61 - 109			
Endosulfan I	14.2013	1.0	0.21	16.6667		85.2	60 - 106			
Endosulfan I [2C]	14.0802	1.0	0.21	16.6667		84.5	60 - 106			
Endosulfan II	15.1767	2.0	0.22	16.6667		91.1	59 - 108			
Endosulfan II [2C]	14.4607	2.0	0.22	16.6667		86.8	59 - 108			
Endosulfan sulfate	13.1708	2.0	0.21	16.6667		79.0	54 - 110			
Endosulfan Sulfate [2C]	13.1407	2.0	0.21	16.6667		78.8	54 - 110			
Endrin	15.7118	2.0	0.23	16.6667		94.3	63 - 112			
Endrin [2C]	16.0930	2.0	0.23	16.6667		96.6	63 - 112			
Endrin aldehyde	14.1060	2.0	0.28	16.6667		84.6	64 - 119			
Endrin aldehyde [2C]	14.5288	2.0	0.28	16.6667		87.2	64 - 119			
Endrin ketone	10.5707	2.0	0.20	16.6667		63.4	54 - 115			
Endrin ketone [2C]	10.6800	2.0	0.20	16.6667		64.1	54 - 115			
gamma-BHC	13.6353	1.0	0.20	16.6667		81.8	60 - 107			
gamma-BHC [2C]	13.8883	1.0	0.20	16.6667		83.3	60 - 107			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0819 - GCSEMI_PCB/PEST_S (continued)										
LCS (B7E0819-BS1) - Continued						Prepared: 5/24/2017 Analyzed: 5/24/2017				
gamma-Chlordane	13.8768	1.0	0.23	16.6667		83.3	57 - 106			
gamma-Chlordane [2C]	13.8610	1.0	0.23	16.6667		83.2	57 - 106			
Heptachlor	11.7530	1.0	0.19	16.6667		70.5	54 - 114			
Heptachlor [2C]	12.1178	1.0	0.19	16.6667		72.7	54 - 114			
Heptachlor epoxide	13.3178	1.0	0.20	16.6667		79.9	61 - 106			
Heptachlor epoxide [2C]	13.6673	1.0	0.20	16.6667		82.0	61 - 106			
Methoxychlor	7.10350	5.0	0.18	16.6667		42.6	18 - 138			
Methoxychlor [2C]	7.85133	5.0	0.18	16.6667		47.1	18 - 138			
Surrogate: Decachlorobiphenyl	*12.52*			*16.6667*		*75.1*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*13.48*			*16.6667*		*80.9*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*15.36*			*16.6667*		*92.2*	*26 - 108*			
Surrogate: Tetrachloro-m-xylene	*15.99*			*16.6667*		*96.0*	*26 - 108*			
Matrix Spike (B7E0819-MS1)			**Source: 1702036-AA**			Prepared: 5/24/2017 Analyzed: 5/24/2017				
4,4´-DDD	9.38000	2.0	0.22	16.6667	ND	56.3	25 - 141			
4,4´-DDD [2C]	10.0630	2.0	0.22	16.6667	ND	60.4	25 - 141			
4,4´-DDE	9.24233	2.0	0.20	16.6667	ND	55.5	22 - 141			
4,4´-DDE [2C]	9.60733	2.0	0.20	16.6667	ND	57.6	22 - 141			
4,4´-DDT	5.43150	2.0	0.13	16.6667	ND	32.6	15 - 136			
4,4´-DDT [2C]	6.10333	2.0	0.13	16.6667	ND	36.6	15 - 136			
Aldrin	8.77633	1.0	0.27	16.6667	ND	52.7	33 - 118			
Aldrin [2C]	9.44567	1.0	0.27	16.6667	ND	56.7	33 - 118			
alpha-BHC	8.88017	1.0	0.20	16.6667	ND	53.3	30 - 116			
alpha-BHC [2C]	9.40600	1.0	0.20	16.6667	ND	56.4	30 - 116			
alpha-Chlordane	9.24317	1.0	0.21	16.6667	ND	55.5	30 - 123			
alpha-Chlordane [2C]	9.56350	1.0	0.21	16.6667	ND	57.4	30 - 123			
beta-BHC	9.02083	1.0	0.23	16.6667	ND	54.1	24 - 121			
beta-BHC [2C]	9.92233	1.0	0.23	16.6667	ND	59.5	24 - 121			
delta-BHC	8.43767	1.0	0.21	16.6667	ND	50.6	7 - 120			
delta-BHC [2C]	8.75083	1.0	0.21	16.6667	ND	52.5	7 - 120			
Dieldrin	9.01167	2.0	0.25	16.6667	ND	54.1	25 - 136			
Dieldrin [2C]	9.30783	2.0	0.25	16.6667	ND	55.8	25 - 136			
Endosulfan I	9.14433	1.0	0.21	16.6667	ND	54.9	18 - 134			
Endosulfan I [2C]	9.34417	1.0	0.21	16.6667	ND	56.1	18 - 134			
Endosulfan II	9.50367	2.0	0.22	16.6667	ND	57.0	28 - 128			
Endosulfan II [2C]	9.64967	2.0	0.22	16.6667	ND	57.9	28 - 128			
Endosulfan sulfate	8.46333	2.0	0.21	16.6667	ND	50.8	5 - 145			
Endosulfan Sulfate [2C]	8.76600	2.0	0.21	16.6667	ND	52.6	5 - 145			
Endrin	9.88317	2.0	0.23	16.6667	ND	59.3	26 - 142			
Endrin [2C]	11.0022	2.0	0.23	16.6667	ND	66.0	26 - 142			
Endrin aldehyde	9.29700	2.0	0.28	16.6667	ND	55.8	8 - 146			

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0819 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike (B7E0819-MS1) - Continued			**Source: 1702036-AA**			Prepared: 5/24/2017 Analyzed: 5/24/2017				
Endrin aldehyde [2C]	6.97367	2.0	0.28	16.6667	ND	41.8	8 - 146			
Endrin ketone	7.14133	2.0	0.20	16.6667	ND	42.8	16 - 139			
Endrin ketone [2C]	7.48550	2.0	0.20	16.6667	ND	44.9	16 - 139			
gamma-BHC	8.64750	1.0	0.20	16.6667	ND	51.9	30 - 122			
gamma-BHC [2C]	9.25950	1.0	0.20	16.6667	ND	55.6	30 - 122			
gamma-Chlordane	8.89250	1.0	0.23	16.6667	ND	53.4	18 - 132			
gamma-Chlordane [2C]	9.23333	1.0	0.23	16.6667	ND	55.4	18 - 132			
Heptachlor	7.82083	1.0	0.19	16.6667	ND	46.9	34 - 122			
Heptachlor [2C]	8.46333	1.0	0.19	16.6667	ND	50.8	34 - 122			
Heptachlor epoxide	8.51117	1.0	0.20	16.6667	ND	51.1	21 - 135			
Heptachlor epoxide [2C]	9.18733	1.0	0.20	16.6667	ND	55.1	21 - 135			
Methoxychlor	5.69633	5.0	0.18	16.6667	ND	34.2	8 - 162			
Methoxychlor [2C]	6.30750	5.0	0.18	16.6667	ND	37.8	8 - 162			
Surrogate: Decachlorobiphenyl	*7.702*			*16.6667*		*46.2*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*9.205*			*16.6667*		*55.2*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*9.194*			*16.6667*		*55.2*	*26 - 108*			
Surrogate: Tetrachloro-m-xylene	*9.815*			*16.6667*		*58.9*	*26 - 108*			
Matrix Spike Dup (B7E0819-MSD1)			**Source: 1702036-AA**			Prepared: 5/24/2017 Analyzed: 5/24/2017				
4,4´-DDD	9.36900	2.0	0.22	16.6667	ND	56.2	25 - 141	0.117	20	
4,4´-DDD [2C]	9.98050	2.0	0.22	16.6667	ND	59.9	25 - 141	0.823	20	
4,4´-DDE	9.17733	2.0	0.20	16.6667	ND	55.1	22 - 141	0.706	20	
4,4´-DDE [2C]	9.51700	2.0	0.20	16.6667	ND	57.1	22 - 141	0.945	20	
4,4´-DDT	4.87767	2.0	0.13	16.6667	ND	29.3	15 - 136	10.7	20	
4,4´-DDT [2C]	6.12300	2.0	0.13	16.6667	ND	36.7	15 - 136	0.322	20	
Aldrin	8.63117	1.0	0.27	16.6667	ND	51.8	33 - 118	1.67	20	
Aldrin [2C]	9.34400	1.0	0.27	16.6667	ND	56.1	33 - 118	1.08	20	
alpha-BHC	8.76000	1.0	0.20	16.6667	ND	52.6	30 - 116	1.36	20	
alpha-BHC [2C]	9.28367	1.0	0.20	16.6667	ND	55.7	30 - 116	1.31	20	
alpha-Chlordane	9.19100	1.0	0.21	16.6667	ND	55.1	30 - 123	0.566	20	
alpha-Chlordane [2C]	9.47733	1.0	0.21	16.6667	ND	56.9	30 - 123	0.905	20	
beta-BHC	8.93900	1.0	0.23	16.6667	ND	53.6	24 - 121	0.911	20	
beta-BHC [2C]	9.80400	1.0	0.23	16.6667	ND	58.8	24 - 121	1.20	20	
delta-BHC	8.31267	1.0	0.21	16.6667	ND	49.9	7 - 120	1.49	20	
delta-BHC [2C]	8.67267	1.0	0.21	16.6667	ND	52.0	7 - 120	0.897	20	
Dieldrin	8.96333	2.0	0.25	16.6667	ND	53.8	25 - 136	0.538	20	
Dieldrin [2C]	9.23900	2.0	0.25	16.6667	ND	55.4	25 - 136	0.742	20	
Endosulfan I	9.09250	1.0	0.21	16.6667	ND	54.6	18 - 134	0.568	20	
Endosulfan I [2C]	9.26267	1.0	0.21	16.6667	ND	55.6	18 - 134	0.876	20	
Endosulfan II	9.49133	2.0	0.22	16.6667	ND	56.9	28 - 128	0.130	20	
Endosulfan II [2C]	9.57233	2.0	0.22	16.6667	ND	57.4	28 - 128	0.805	20	

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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0819 - GCSEMI_PCB/PEST_S (continued)										
Matrix Spike Dup (B7E0819-MSD1) - Continued			**Source: 1702036-AA**		Prepared: 5/24/2017 Analyzed: 5/24/2017					
Endosulfan sulfate	8.40433	2.0	0.21	16.6667	ND	50.4	5 - 145	0.700	20	
Endosulfan Sulfate [2C]	8.73317	2.0	0.21	16.6667	ND	52.4	5 - 145	0.375	20	
Endrin	9.84750	2.0	0.23	16.6667	ND	59.1	26 - 142	0.362	20	
Endrin [2C]	10.8925	2.0	0.23	16.6667	ND	65.4	26 - 142	1.00	20	
Endrin aldehyde	8.91967	2.0	0.28	16.6667	ND	53.5	8 - 146	4.14	20	
Endrin aldehyde [2C]	6.82533	2.0	0.28	16.6667	ND	41.0	8 - 146	2.15	20	
Endrin ketone	7.20633	2.0	0.20	16.6667	ND	43.2	16 - 139	0.906	20	
Endrin ketone [2C]	7.50650	2.0	0.20	16.6667	ND	45.0	16 - 139	0.280	20	
gamma-BHC	8.53150	1.0	0.20	16.6667	ND	51.2	30 - 122	1.35	20	
gamma-BHC [2C]	9.15933	1.0	0.20	16.6667	ND	55.0	30 - 122	1.09	20	
gamma-Chlordane	8.83150	1.0	0.23	16.6667	ND	53.0	18 - 132	0.688	20	
gamma-Chlordane [2C]	9.16000	1.0	0.23	16.6667	ND	55.0	18 - 132	0.797	20	
Heptachlor	7.71917	1.0	0.19	16.6667	ND	46.3	34 - 122	1.31	20	
Heptachlor [2C]	8.37083	1.0	0.19	16.6667	ND	50.2	34 - 122	1.10	20	
Heptachlor epoxide	8.45700	1.0	0.20	16.6667	ND	50.7	21 - 135	0.638	20	
Heptachlor epoxide [2C]	9.12267	1.0	0.20	16.6667	ND	54.7	21 - 135	0.706	20	
Methoxychlor	5.75167	5.0	0.18	16.6667	ND	34.5	8 - 162	0.967	20	
Methoxychlor [2C]	6.32900	5.0	0.18	16.6667	ND	38.0	8 - 162	0.340	20	
Surrogate: Decachlorobiphenyl	*8.397*			*16.6667*		*50.4*	*27 - 123*			
Surrogate: Decachlorobiphenyl [	*9.234*			*16.6667*		*55.4*	*27 - 123*			
Surrogate: Tetrachloro-m-xylene	*9.134*			*16.6667*		*54.8*	*26 - 108*			
Surrogate: Tetrachloro-m-xylene	*9.671*			*16.6667*		*58.0*	*26 - 108*			

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Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0750 - GCSEMI_PCB/PEST_S										
Blank (B7E0750-BLK2)						Prepared: 5/22/2017 Analyzed: 5/22/2017				
Aroclor 1016	ND	16	1.5							
Aroclor 1221	ND	16	1.5							
Aroclor 1232	ND	16	1.5							
Aroclor 1242	ND	16	1.5							
Aroclor 1248	ND	16	1.5							
Aroclor 1254	ND	16	1.5							
Aroclor 1260	ND	16	1.5							
Aroclor 1262	ND	16	1.5							
Aroclor 1268	ND	16	1.5							
Surrogate: Decachlorobiphenyl	*15.44*			*16.6667*		*92.6*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*15.30*			*16.6667*		*91.8*	*30 - 130*			
LCS (B7E0750-BS2)						Prepared: 5/22/2017 Analyzed: 5/22/2017				
Aroclor 1016	151.591	16	1.5	166.667		91.0	73 - 111			
Aroclor 1260	170.434	16	1.5	166.667		102	75 - 125			
Surrogate: Decachlorobiphenyl	*15.78*			*16.6667*		*94.7*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*15.68*			*16.6667*		*94.1*	*30 - 130*			
Matrix Spike (B7E0750-MS2)			**Source: 1702074-02**			Prepared: 5/22/2017 Analyzed: 5/22/2017				
Aroclor 1016	149.019	16	1.5	166.667	ND	89.4	36 - 127			
Aroclor 1260	159.258	16	1.5	166.667	ND	95.6	31 - 142			
Surrogate: Decachlorobiphenyl	*15.29*			*16.6667*		*91.7*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*14.30*			*16.6667*		*85.8*	*30 - 130*			
Matrix Spike Dup (B7E0750-MSD2)			**Source: 1702074-02**			Prepared: 5/22/2017 Analyzed: 5/22/2017				
Aroclor 1016	145.573	16	1.5	166.667	ND	87.3	36 - 127	2.34	20	
Aroclor 1260	154.035	16	1.5	166.667	ND	92.4	31 - 142	3.33	20	
Surrogate: Decachlorobiphenyl	*14.53*			*16.6667*		*87.2*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*13.82*			*16.6667*		*82.9*	*30 - 130*			

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Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0819 - GCSEMI_PCB/PEST_S										
Blank (B7E0819-BLK2)						Prepared: 5/24/2017 Analyzed: 5/24/2017				
Aroclor 1016	ND	16	1.5							
Aroclor 1221	ND	16	1.5							
Aroclor 1232	ND	16	1.5							
Aroclor 1242	ND	16	1.5							
Aroclor 1248	ND	16	1.5							
Aroclor 1254	ND	16	1.5							
Aroclor 1260	ND	16	1.5							
Aroclor 1262	ND	16	1.5							
Aroclor 1268	ND	16	1.5							
Surrogate: Decachlorobiphenyl	*13.58*			*16.6667*		*81.5*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*16.38*			*16.6667*		*98.3*	*30 - 130*			
LCS (B7E0819-BS2)						Prepared: 5/24/2017 Analyzed: 5/24/2017				
Aroclor 1016	140.010	16	1.5	166.667		84.0	73 - 111			
Aroclor 1260	144.947	16	1.5	166.667		87.0	75 - 125			
Surrogate: Decachlorobiphenyl	*11.78*			*16.6667*		*70.7*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*14.41*			*16.6667*		*86.5*	*30 - 130*			
Matrix Spike (B7E0819-MS2)			**Source: 1702036-AA**			Prepared: 5/24/2017 Analyzed: 5/24/2017				
Aroclor 1016	119.665	16	1.5	166.667	ND	71.8	36 - 127			
Aroclor 1260	113.055	16	1.5	166.667	ND	67.8	31 - 142			
Surrogate: Decachlorobiphenyl	*8.732*			*16.6667*		*52.4*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*11.40*			*16.6667*		*68.4*	*30 - 130*			
Matrix Spike Dup (B7E0819-MSD2)			**Source: 1702036-AA**			Prepared: 5/24/2017 Analyzed: 5/24/2017				
Aroclor 1016	128.332	16	1.5	166.667	ND	77.0	36 - 127	6.99	20	
Aroclor 1260	115.243	16	1.5	166.667	ND	69.1	31 - 142	1.92	20	
Surrogate: Decachlorobiphenyl	*8.946*			*16.6667*		*53.7*	*18 - 136*			
Surrogate: Tetrachloro-m-xylene	*12.21*			*16.6667*		*73.3*	*30 - 130*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S										
Blank (B7E0639-BLK1)					Prepared: 5/18/2017 Analyzed: 5/18/2017					
1,1,1,2-Tetrachloroethane	ND	5.0	0.63							
1,1,1-Trichloroethane	ND	5.0	0.63							
1,1,2,2-Tetrachloroethane	ND	5.0	0.92							
1,1,2-Trichloroethane	ND	5.0	1.4							
1,1-Dichloroethane	ND	5.0	1.5							
1,1-Dichloroethene	ND	5.0	0.69							
1,1-Dichloropropene	ND	5.0	2.4							
1,2,3-Trichloropropane	ND	5.0	1.2							
1,2,3-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trichlorobenzene	ND	5.0	0.96							
1,2,4-Trimethylbenzene	ND	5.0	0.53							
1,2-Dibromo-3-chloropropane	ND	10	1.1							
1,2-Dibromoethane	ND	5.0	0.80							
1,2-Dichlorobenzene	ND	5.0	0.51							
1,2-Dichloroethane	ND	5.0	0.53							
1,2-Dichloropropane	ND	5.0	0.76							
1,3,5-Trimethylbenzene	ND	5.0	0.58							
1,3-Dichlorobenzene	ND	5.0	0.63							
1,3-Dichloropropane	ND	5.0	0.59							
1,4-Dichlorobenzene	ND	5.0	0.73							
2,2-Dichloropropane	ND	5.0	0.68							
2-Chlorotoluene	ND	5.0	0.68							
4-Chlorotoluene	ND	5.0	0.62							
4-Isopropyltoluene	ND	5.0	0.63							
Benzene	ND	5.0	0.59							
Bromobenzene	ND	5.0	1.9							
Bromochloromethane	ND	5.0	3.1							
Bromodichloromethane	ND	5.0	1.0							
Bromoform	ND	5.0	0.70							
Bromomethane	ND	5.0	4.2							
Carbon disulfide	ND	5.0	1.2							
Carbon tetrachloride	ND	5.0	1.1							
Chlorobenzene	ND	5.0	0.64							
Chloroethane	ND	5.0	1.9							
Chloroform	ND	5.0	1.4							
Chloromethane	ND	5.0	1.9							
cis-1,2-Dichloroethene	ND	5.0	0.87							
cis-1,3-Dichloropropene	ND	5.0	0.79							
Di-isopropyl ether	ND	5.0	0.51							
Dibromochloromethane	ND	5.0	1.0							
Dibromomethane	ND	5.0	0.99							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
Blank (B7E0639-BLK1) - Continued					Prepared: 5/18/2017 Analyzed: 5/18/2017					
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	9.7							
Ethyl Ether	ND	50	7.3							
Ethyl tert-butyl ether	ND	5.0	1.4							
Ethylbenzene	ND	5.0	0.65							
Freon-113	ND	5.0	1.0							
Hexachlorobutadiene	ND	5.0	0.78							
Isopropylbenzene	ND	5.0	0.59							
m,p-Xylene	ND	10	1.2							
Methylene chloride	ND	5.0	1.4							
MTBE	ND	5.0	0.50							
n-Butylbenzene	ND	5.0	0.75							
n-Propylbenzene	ND	5.0	0.55							
Naphthalene	ND	5.0	1.2							
o-Xylene	ND	5.0	0.86							
sec-Butylbenzene	ND	5.0	0.79							
Styrene	ND	5.0	0.82							
tert-Amyl methyl ether	ND	5.0	1.5							
tert-Butanol	ND	100	5.9							
tert-Butylbenzene	ND	5.0	0.57							
Tetrachloroethene	ND	5.0	0.65							
Toluene	ND	5.0	0.80							
trans-1,2-Dichloroethene	ND	5.0	1.5							
trans-1,3-Dichloropropene	ND	5.0	0.63							
Trichloroethene	ND	5.0	1.1							
Trichlorofluoromethane	ND	5.0	0.89							
Vinyl acetate	ND	50	5.7							
Vinyl chloride	ND	5.0	2.0							
Surrogate: 1,2-Dichloroethane-d4	*59.51*			*50.0000*		*119*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*50.19*			*50.0000*		*100*	*23 - 162*			
Surrogate: Dibromofluoromethan	*50.95*			*50.0000*		*102*	*23 - 179*			
Surrogate: Toluene-d8	*51.07*			*50.0000*		*102*	*26 - 164*			
LCS (B7E0639-BS1)					Prepared: 5/18/2017 Analyzed: 5/18/2017					
1,1,1,2-Tetrachloroethane	50.3000	5.0	0.63	50.0000		101	78 - 119			
1,1,1-Trichloroethane	45.5800	5.0	0.63	50.0000		91.2	75 - 123			
1,1,2,2-Tetrachloroethane	51.3700	5.0	0.92	50.0000		103	65 - 117			
1,1,2-Trichloroethane	55.7900	5.0	1.4	50.0000		112	79 - 108			L5
1,1-Dichloroethane	47.5300	5.0	1.5	50.0000		95.1	69 - 120			
1,1-Dichloroethene	49.4600	5.0	0.69	50.0000		98.9	59 - 126			
1,1-Dichloropropene	45.8600	5.0	2.4	50.0000		91.7	76 - 121			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
LCS (B7E0639-BS1) - Continued					Prepared: 5/18/2017 Analyzed: 5/18/2017					
1,2,3-Trichloropropane	53.4400	5.0	1.2	50.0000		107	66 - 118			
1,2,3-Trichlorobenzene	61.2200	5.0	1.1	50.0000		122	75 - 116			L5
1,2,4-Trichlorobenzene	61.2700	5.0	0.96	50.0000		123	79 - 121			L5
1,2,4-Trimethylbenzene	49.8000	5.0	0.53	50.0000		99.6	80 - 118			
1,2-Dibromo-3-chloropropane	55.0200	10	1.1	50.0000		110	65 - 122			
1,2-Dibromoethane	61.9500	5.0	0.80	50.0000		124	77 - 115			L5
1,2-Dichlorobenzene	52.7200	5.0	0.51	50.0000		105	81 - 115			
1,2-Dichloroethane	56.4100	5.0	0.53	50.0000		113	70 - 122			
1,2-Dichloropropane	53.1700	5.0	0.76	50.0000		106	77 - 110			
1,3,5-Trimethylbenzene	47.2900	5.0	0.58	50.0000		94.6	79 - 119			
1,3-Dichlorobenzene	50.1600	5.0	0.63	50.0000		100	81 - 116			
1,3-Dichloropropane	57.1400	5.0	0.59	50.0000		114	79 - 113			L5
1,4-Dichlorobenzene	51.2400	5.0	0.73	50.0000		102	80 - 117			
2,2-Dichloropropane	46.9900	5.0	0.68	50.0000		94.0	70 - 129			
2-Chlorotoluene	47.4700	5.0	0.68	50.0000		94.9	76 - 119			
4-Chlorotoluene	48.6800	5.0	0.62	50.0000		97.4	79 - 119			
4-Isopropyltoluene	49.0000	5.0	0.63	50.0000		98.0	80 - 122			
Benzene	96.8600	5.0	0.59	100.000		96.9	79 - 111			
Bromobenzene	49.4200	5.0	1.9	50.0000		98.8	77 - 114			
Bromochloromethane	52.1800	5.0	3.1	50.0000		104	69 - 117			
Bromodichloromethane	54.5100	5.0	1.0	50.0000		109	79 - 114			
Bromoform	53.2900	5.0	0.70	50.0000		107	72 - 122			
Bromomethane	51.6300	5.0	4.2	50.0000		103	47 - 176			
Carbon disulfide	54.7000	5.0	1.2	50.0000		109	50 - 133			
Carbon tetrachloride	45.3500	5.0	1.1	50.0000		90.7	68 - 143			
Chlorobenzene	48.2900	5.0	0.64	50.0000		96.6	81 - 113			
Chloroethane	45.9100	5.0	1.9	50.0000		91.8	47 - 148			
Chloroform	48.9600	5.0	1.4	50.0000		97.9	77 - 116			
Chloromethane	66.3700	5.0	1.9	50.0000		133	39 - 141			
cis-1,2-Dichloroethene	47.3000	5.0	0.87	50.0000		94.6	68 - 120			
cis-1,3-Dichloropropene	52.0700	5.0	0.79	50.0000		104	74 - 113			
Di-isopropyl ether	51.2100	5.0	0.51	50.0000		102	62 - 124			
Dibromochloromethane	55.0300	5.0	1.0	50.0000		110	78 - 114			
Dibromomethane	54.0500	5.0	0.99	50.0000		108	74 - 112			
Dichlorodifluoromethane	48.5400	5.0	2.2	50.0000		97.1	49 - 138			
Ethyl Acetate	610.030	50	9.7	500.000		122	63 - 131			
Ethyl Ether	592.910	50	7.3	500.000		119	56 - 123			
Ethyl tert-butyl ether	54.1900	5.0	1.4	50.0000		108	68 - 121			
Ethylbenzene	92.8700	5.0	0.65	100.000		92.9	82 - 112			
Freon-113	50.3800	5.0	1.0	50.0000		101	65 - 133			
Hexachlorobutadiene	54.5300	5.0	0.78	50.0000		109	76 - 131			
Isopropylbenzene	45.2000	5.0	0.59	50.0000		90.4	77 - 122			

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Irvine , CA 92618	Reported : 06/05/2017

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
LCS (B7E0639-BS1) - Continued					Prepared: 5/18/2017 Analyzed: 5/18/2017					
m,p-Xylene	97.7100	10	1.2	100.000		97.7	80 - 116			
Methylene chloride	47.5000	5.0	1.4	50.0000		95.0	67 - 144			
MTBE	56.1800	5.0	0.50	50.0000		112	62 - 120			
n-Butylbenzene	50.8500	5.0	0.75	50.0000		102	78 - 134			
n-Propylbenzene	46.3100	5.0	0.55	50.0000		92.6	77 - 125			
Naphthalene	59.4400	5.0	1.2	50.0000		119	66 - 125			
o-Xylene	95.0000	5.0	0.86	100.000		95.0	80 - 113			
sec-Butylbenzene	46.0900	5.0	0.79	50.0000		92.2	79 - 124			
Styrene	52.1000	5.0	0.82	50.0000		104	82 - 117			
tert-Amyl methyl ether	53.9900	5.0	1.5	50.0000		108	62 - 118			
tert-Butanol	299.880	100	5.9	250.000		120	35 - 127			
tert-Butylbenzene	46.2700	5.0	0.57	50.0000		92.5	78 - 121			
Tetrachloroethene	46.1900	5.0	0.65	50.0000		92.4	75 - 124			
Toluene	96.2000	5.0	0.80	100.000		96.2	79 - 115			
trans-1,2-Dichloroethene	45.7900	5.0	1.5	50.0000		91.6	65 - 127			
trans-1,3-Dichloropropene	55.0200	5.0	0.63	50.0000		110	73 - 115			
Trichloroethene	48.6600	5.0	1.1	50.0000		97.3	77 - 119			
Trichlorofluoromethane	50.9300	5.0	0.89	50.0000		102	57 - 134			
Vinyl acetate	612.610	50	5.7	500.000		123	62 - 147			
Vinyl chloride	55.3500	5.0	2.0	50.0000		111	53 - 133			
Surrogate: 1,2-Dichloroethane-d4	*57.24*			*50.0000*		*114*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*52.63*			*50.0000*		*105*	*23 - 162*			
Surrogate: Dibromofluoromethan	*52.55*			*50.0000*		*105*	*23 - 179*			
Surrogate: Toluene-d8	*53.06*			*50.0000*		*106*	*26 - 164*			
Matrix Spike (B7E0639-MS1)			**Source: 1702036-22**		Prepared: 5/18/2017 Analyzed: 5/18/2017					
1,1,1,2-Tetrachloroethane	47.3100	5.0	0.63	50.0000	ND	94.6	45 - 124			
1,1,1-Trichloroethane	47.0900	5.0	0.63	50.0000	ND	94.2	53 - 125			
1,1,2,2-Tetrachloroethane	50.1900	5.0	0.92	50.0000	ND	100	42 - 117			
1,1,2-Trichloroethane	52.7600	5.0	1.4	50.0000	ND	106	48 - 120			
1,1-Dichloroethane	46.4000	5.0	1.5	50.0000	ND	92.8	54 - 116			
1,1-Dichloroethene	47.6900	5.0	0.69	50.0000	ND	95.4	47 - 123			
1,1-Dichloropropene	46.2000	5.0	2.4	50.0000	ND	92.4	48 - 126			
1,2,3-Trichloropropane	51.1200	5.0	1.2	50.0000	ND	102	46 - 118			
1,2,3-Trichlorobenzene	45.3500	5.0	1.1	50.0000	ND	90.7	1 - 132			
1,2,4-Trichlorobenzene	47.7400	5.0	0.96	50.0000	ND	95.5	2 - 138			
1,2,4-Trimethylbenzene	44.8900	5.0	0.53	50.0000	ND	89.8	32 - 129			
1,2-Dibromo-3-chloropropane	57.4000	10	1.1	50.0000	ND	115	34 - 130			
1,2-Dibromoethane	55.0200	5.0	0.80	50.0000	ND	110	45 - 125			
1,2-Dichlorobenzene	45.7300	5.0	0.51	50.0000	ND	91.5	25 - 130			
1,2-Dichloroethane	52.4100	5.0	0.53	50.0000	ND	105	51 - 119			

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Irvine , CA 92618	Reported : 06/05/2017

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
Matrix Spike (B7E0639-MS1) - Continued			**Source: 1702036-22**		Prepared: 5/18/2017 Analyzed: 5/18/2017					
1,2-Dichloropropane	49.0000	5.0	0.76	50.0000	ND	98.0	54 - 113			
1,3,5-Trimethylbenzene	43.0200	5.0	0.58	50.0000	ND	86.0	34 - 128			
1,3-Dichlorobenzene	43.8600	5.0	0.63	50.0000	ND	87.7	26 - 130			
1,3-Dichloropropane	53.3000	5.0	0.59	50.0000	ND	107	53 - 117			
1,4-Dichlorobenzene	44.2400	5.0	0.73	50.0000	ND	88.5	26 - 130			
2,2-Dichloropropane	48.5300	5.0	0.68	50.0000	ND	97.1	52 - 128			
2-Chlorotoluene	43.7800	5.0	0.68	50.0000	ND	87.6	34 - 126			
4-Chlorotoluene	44.0500	5.0	0.62	50.0000	ND	88.1	32 - 128			
4-Isopropyltoluene	43.8900	5.0	0.63	50.0000	ND	87.8	28 - 133			
Benzene	89.7500	5.0	0.59	100.000	ND	89.8	55 - 113			
Bromobenzene	44.9300	5.0	1.9	50.0000	ND	89.9	36 - 122			
Bromochloromethane	49.8300	5.0	3.1	50.0000	ND	99.7	50 - 118			
Bromodichloromethane	49.0400	5.0	1.0	50.0000	ND	98.1	51 - 117			
Bromoform	50.8700	5.0	0.70	50.0000	ND	102	39 - 130			
Bromomethane	48.3800	5.0	4.2	50.0000	ND	96.8	38 - 151			
Carbon disulfide	52.3300	5.0	1.2	50.0000	ND	105	38 - 126			
Carbon tetrachloride	44.4000	5.0	1.1	50.0000	ND	88.8	43 - 141			
Chlorobenzene	45.1900	5.0	0.64	50.0000	ND	90.4	42 - 122			
Chloroethane	43.9800	5.0	1.9	50.0000	ND	88.0	42 - 129			
Chloroform	48.0100	5.0	1.4	50.0000	ND	96.0	56 - 117			
Chloromethane	60.9500	5.0	1.9	50.0000	ND	122	35 - 127			
cis-1,2-Dichloroethene	48.6700	5.0	0.87	50.0000	ND	97.3	50 - 118			
cis-1,3-Dichloropropene	51.9800	5.0	0.79	50.0000	ND	104	45 - 118			
Di-isopropyl ether	48.7600	5.0	0.51	50.0000	ND	97.5	51 - 119			
Dibromochloromethane	52.8100	5.0	1.0	50.0000	ND	106	47 - 120			
Dibromomethane	49.8600	5.0	0.99	50.0000	ND	99.7	48 - 118			
Dichlorodifluoromethane	49.1100	5.0	2.2	50.0000	ND	98.2	43 - 126			
Ethyl Acetate	602.890	50	9.7	500.000	ND	121	22 - 145			
Ethyl Ether	543.200	50	7.3	500.000	ND	109	49 - 114			
Ethyl tert-butyl ether	52.8000	5.0	1.4	50.0000	ND	106	54 - 120			
Ethylbenzene	88.7800	5.0	0.65	100.000	ND	88.8	42 - 123			
Freon-113	51.5200	5.0	1.0	50.0000	ND	103	45 - 132			
Hexachlorobutadiene	40.5800	5.0	0.78	50.0000	ND	81.2	4 - 135			
Isopropylbenzene	43.1400	5.0	0.59	50.0000	ND	86.3	40 - 127			
m,p-Xylene	91.8800	10	1.2	100.000	ND	91.9	39 - 127			
Methylene chloride	44.3500	5.0	1.4	50.0000	ND	88.7	51 - 140			
MTBE	55.3400	5.0	0.50	50.0000	ND	111	52 - 120			
n-Butylbenzene	45.0100	5.0	0.75	50.0000	ND	90.0	19 - 141			
n-Propylbenzene	43.0500	5.0	0.55	50.0000	ND	86.1	34 - 131			
Naphthalene	50.6700	5.0	1.2	50.0000	ND	101	11 - 136			
o-Xylene	88.8500	5.0	0.86	100.000	ND	88.8	40 - 124			
sec-Butylbenzene	41.8300	5.0	0.79	50.0000	ND	83.7	29 - 132			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
Matrix Spike (B7E0639-MS1) - Continued			**Source: 1702036-22**		Prepared: 5/18/2017 Analyzed: 5/18/2017					
Styrene	48.1300	5.0	0.82	50.0000	ND	96.3	36 - 130			
tert-Amyl methyl ether	52.3400	5.0	1.5	50.0000	ND	105	49 - 119			
tert-Butanol	277.760	100	5.9	250.000	ND	111	29 - 138			
tert-Butylbenzene	42.6300	5.0	0.57	50.0000	ND	85.3	34 - 129			
Tetrachloroethene	45.7400	5.0	0.65	50.0000	ND	91.5	37 - 132			
Toluene	87.1800	5.0	0.80	100.000	ND	87.2	48 - 122			
trans-1,2-Dichloroethene	45.0500	5.0	1.5	50.0000	ND	90.1	51 - 123			
trans-1,3-Dichloropropene	49.0900	5.0	0.63	50.0000	ND	98.2	38 - 125			
Trichloroethene	46.3800	5.0	1.1	50.0000	ND	92.8	41 - 136			
Trichlorofluoromethane	51.6200	5.0	0.89	50.0000	ND	103	44 - 126			
Vinyl acetate	514.220	50	5.7	500.000	ND	103	0 - 154			
Vinyl chloride	56.3100	5.0	2.0	50.0000	ND	113	47 - 122			
Surrogate: 1,2-Dichloroethane-d4	*58.87*			*50.0000*		*118*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*51.18*			*50.0000*		*102*	*23 - 162*			
Surrogate: Dibromofluoromethan	*52.48*			*50.0000*		*105*	*23 - 179*			
Surrogate: Toluene-d8	*51.22*			*50.0000*		*102*	*26 - 164*			
Matrix Spike Dup (B7E0639-MSD1)			**Source: 1702036-22**		Prepared: 5/18/2017 Analyzed: 5/18/2017					
1,1,1,2-Tetrachloroethane	45.3500	5.0	0.63	50.0000	ND	90.7	45 - 124	4.23	20	
1,1,1-Trichloroethane	44.7800	5.0	0.63	50.0000	ND	89.6	53 - 125	5.03	20	
1,1,2,2-Tetrachloroethane	49.1300	5.0	0.92	50.0000	ND	98.3	42 - 117	2.13	20	
1,1,2-Trichloroethane	50.0900	5.0	1.4	50.0000	ND	100	48 - 120	5.19	20	
1,1-Dichloroethane	45.9200	5.0	1.5	50.0000	ND	91.8	54 - 116	1.04	20	
1,1-Dichloroethene	45.6500	5.0	0.69	50.0000	ND	91.3	47 - 123	4.37	20	
1,1-Dichloropropene	45.1100	5.0	2.4	50.0000	ND	90.2	48 - 126	2.39	20	
1,2,3-Trichloropropane	50.4500	5.0	1.2	50.0000	ND	101	46 - 118	1.32	20	
1,2,3-Trichlorobenzene	39.8800	5.0	1.1	50.0000	ND	79.8	1 - 132	12.8	20	
1,2,4-Trichlorobenzene	41.9500	5.0	0.96	50.0000	ND	83.9	2 - 138	12.9	20	
1,2,4-Trimethylbenzene	42.9100	5.0	0.53	50.0000	ND	85.8	32 - 129	4.51	20	
1,2-Dibromo-3-chloropropane	53.8800	10	1.1	50.0000	ND	108	34 - 130	6.33	20	
1,2-Dibromoethane	55.8700	5.0	0.80	50.0000	ND	112	45 - 125	1.53	20	
1,2-Dichlorobenzene	43.8200	5.0	0.51	50.0000	ND	87.6	25 - 130	4.27	20	
1,2-Dichloroethane	51.5900	5.0	0.53	50.0000	ND	103	51 - 119	1.58	20	
1,2-Dichloropropane	48.5500	5.0	0.76	50.0000	ND	97.1	54 - 113	0.923	20	
1,3,5-Trimethylbenzene	41.2700	5.0	0.58	50.0000	ND	82.5	34 - 128	4.15	20	
1,3-Dichlorobenzene	41.1800	5.0	0.63	50.0000	ND	82.4	26 - 130	6.30	20	
1,3-Dichloropropane	53.4100	5.0	0.59	50.0000	ND	107	53 - 117	0.206	20	
1,4-Dichlorobenzene	42.4100	5.0	0.73	50.0000	ND	84.8	26 - 130	4.22	20	
2,2-Dichloropropane	47.0400	5.0	0.68	50.0000	ND	94.1	52 - 128	3.12	20	
2-Chlorotoluene	41.1300	5.0	0.68	50.0000	ND	82.3	34 - 126	6.24	20	
4-Chlorotoluene	41.7600	5.0	0.62	50.0000	ND	83.5	32 - 128	5.34	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
Matrix Spike Dup (B7E0639-MSD1) - Continued			**Source: 1702036-22**		Prepared: 5/18/2017 Analyzed: 5/18/2017					
4-Isopropyltoluene	41.3100	5.0	0.63	50.0000	ND	82.6	28 - 133	6.06	20	
Benzene	88.2300	5.0	0.59	100.000	ND	88.2	55 - 113	1.71	20	
Bromobenzene	43.2600	5.0	1.9	50.0000	ND	86.5	36 - 122	3.79	20	
Bromochloromethane	49.6200	5.0	3.1	50.0000	ND	99.2	50 - 118	0.422	20	
Bromodichloromethane	48.1000	5.0	1.0	50.0000	ND	96.2	51 - 117	1.94	20	
Bromoform	51.5200	5.0	0.70	50.0000	ND	103	39 - 130	1.27	20	
Bromomethane	46.7000	5.0	4.2	50.0000	ND	93.4	38 - 151	3.53	20	
Carbon disulfide	48.0900	5.0	1.2	50.0000	ND	96.2	38 - 126	8.44	20	
Carbon tetrachloride	42.3800	5.0	1.1	50.0000	ND	84.8	43 - 141	4.66	20	
Chlorobenzene	43.8400	5.0	0.64	50.0000	ND	87.7	42 - 122	3.03	20	
Chloroethane	42.1000	5.0	1.9	50.0000	ND	84.2	42 - 129	4.37	20	
Chloroform	46.4300	5.0	1.4	50.0000	ND	92.9	56 - 117	3.35	20	
Chloromethane	58.1300	5.0	1.9	50.0000	ND	116	35 - 127	4.74	20	
cis-1,2-Dichloroethene	47.3100	5.0	0.87	50.0000	ND	94.6	50 - 118	2.83	20	
cis-1,3-Dichloropropene	50.1800	5.0	0.79	50.0000	ND	100	45 - 118	3.52	20	
Di-isopropyl ether	48.9600	5.0	0.51	50.0000	ND	97.9	51 - 119	0.409	20	
Dibromochloromethane	50.4100	5.0	1.0	50.0000	ND	101	47 - 120	4.65	20	
Dibromomethane	49.6300	5.0	0.99	50.0000	ND	99.3	48 - 118	0.462	20	
Dichlorodifluoromethane	48.3600	5.0	2.2	50.0000	ND	96.7	43 - 126	1.54	20	
Ethyl Acetate	586.060	50	9.7	500.000	ND	117	22 - 145	2.83	20	
Ethyl Ether	524.430	50	7.3	500.000	ND	105	49 - 114	3.52	20	
Ethyl tert-butyl ether	52.4300	5.0	1.4	50.0000	ND	105	54 - 120	0.703	20	
Ethylbenzene	84.7300	5.0	0.65	100.000	ND	84.7	42 - 123	4.67	20	
Freon-113	47.0800	5.0	1.0	50.0000	ND	94.2	45 - 132	9.01	20	
Hexachlorobutadiene	36.2300	5.0	0.78	50.0000	ND	72.5	4 - 135	11.3	20	
Isopropylbenzene	40.9600	5.0	0.59	50.0000	ND	81.9	40 - 127	5.18	20	
m,p-Xylene	88.1100	10	1.2	100.000	ND	88.1	39 - 127	4.19	20	
Methylene chloride	45.0600	5.0	1.4	50.0000	ND	90.1	51 - 140	1.59	20	
MTBE	54.8800	5.0	0.50	50.0000	ND	110	52 - 120	0.835	20	
n-Butylbenzene	40.8800	5.0	0.75	50.0000	ND	81.8	19 - 141	9.62	20	
n-Propylbenzene	40.5900	5.0	0.55	50.0000	ND	81.2	34 - 131	5.88	20	
Naphthalene	47.6500	5.0	1.2	50.0000	ND	95.3	11 - 136	6.14	20	
o-Xylene	85.5800	5.0	0.86	100.000	ND	85.6	40 - 124	3.75	20	
sec-Butylbenzene	38.9300	5.0	0.79	50.0000	ND	77.9	29 - 132	7.18	20	
Styrene	45.7300	5.0	0.82	50.0000	ND	91.5	36 - 130	5.11	20	
tert-Amyl methyl ether	52.0100	5.0	1.5	50.0000	ND	104	49 - 119	0.632	20	
tert-Butanol	322.520	100	5.9	250.000	ND	129	29 - 138	14.9	20	
tert-Butylbenzene	40.1300	5.0	0.57	50.0000	ND	80.3	34 - 129	6.04	20	
Tetrachloroethene	44.0900	5.0	0.65	50.0000	ND	88.2	37 - 132	3.67	20	
Toluene	87.0800	5.0	0.80	100.000	ND	87.1	48 - 122	0.115	20	
trans-1,2-Dichloroethene	43.0700	5.0	1.5	50.0000	ND	86.1	51 - 123	4.49	20	
trans-1,3-Dichloropropene	50.5900	5.0	0.63	50.0000	ND	101	38 - 125	3.01	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0639 - MSVOA_S (continued)										
Matrix Spike Dup (B7E0639-MSD1) - Continued			**Source: 1702036-22**		Prepared: 5/18/2017 Analyzed: 5/18/2017					
Trichloroethene	45.5200	5.0	1.1	50.0000	ND	91.0	41 - 136	1.87	20	
Trichlorofluoromethane	48.3200	5.0	0.89	50.0000	ND	96.6	44 - 126	6.60	20	
Vinyl acetate	412.230	50	5.7	500.000	ND	82.4	0 - 154	22.0	20	R
Vinyl chloride	53.2200	5.0	2.0	50.0000	ND	106	47 - 122	5.64	20	
Surrogate: 1,2-Dichloroethane-d4	*58.57*			*50.0000*		*117*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*51.79*			*50.0000*		*104*	*23 - 162*			
Surrogate: Dibromofluoromethan	*52.33*			*50.0000*		*105*	*23 - 179*			
Surrogate: Toluene-d8	*50.82*			*50.0000*		*102*	*26 - 164*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S										
Blank (B7E0654-BLK1)					Prepared: 5/19/2017 Analyzed: 5/19/2017					
1,1,1,2-Tetrachloroethane	ND	5.0	0.63							
1,1,1-Trichloroethane	ND	5.0	0.63							
1,1,2,2-Tetrachloroethane	ND	5.0	0.92							
1,1,2-Trichloroethane	ND	5.0	1.4							
1,1-Dichloroethane	ND	5.0	1.5							
1,1-Dichloroethene	ND	5.0	0.69							
1,1-Dichloropropene	ND	5.0	2.4							
1,2,3-Trichloropropane	ND	5.0	1.2							
1,2,3-Trichlorobenzene	ND	5.0	1.1							
1,2,4-Trichlorobenzene	ND	5.0	0.96							
1,2,4-Trimethylbenzene	ND	5.0	0.53							
1,2-Dibromo-3-chloropropane	ND	10	1.1							
1,2-Dibromoethane	ND	5.0	0.80							
1,2-Dichlorobenzene	ND	5.0	0.51							
1,2-Dichloroethane	ND	5.0	0.53							
1,2-Dichloropropane	ND	5.0	0.76							
1,3,5-Trimethylbenzene	ND	5.0	0.58							
1,3-Dichlorobenzene	ND	5.0	0.63							
1,3-Dichloropropane	ND	5.0	0.59							
1,4-Dichlorobenzene	ND	5.0	0.73							
2,2-Dichloropropane	ND	5.0	0.68							
2-Chlorotoluene	ND	5.0	0.68							
4-Chlorotoluene	ND	5.0	0.62							
4-Isopropyltoluene	ND	5.0	0.63							
Benzene	ND	5.0	0.59							
Bromobenzene	ND	5.0	1.9							
Bromochloromethane	ND	5.0	3.1							
Bromodichloromethane	ND	5.0	1.0							
Bromoform	ND	5.0	0.70							
Bromomethane	ND	5.0	4.2							
Carbon disulfide	ND	5.0	1.2							
Carbon tetrachloride	ND	5.0	1.1							
Chlorobenzene	ND	5.0	0.64							
Chloroethane	ND	5.0	1.9							
Chloroform	ND	5.0	1.4							
Chloromethane	ND	5.0	1.9							
cis-1,2-Dichloroethene	ND	5.0	0.87							
cis-1,3-Dichloropropene	ND	5.0	0.79							
Di-isopropyl ether	ND	5.0	0.51							
Dibromochloromethane	ND	5.0	1.0							
Dibromomethane	ND	5.0	0.99							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
Blank (B7E0654-BLK1) - Continued					Prepared: 5/19/2017 Analyzed: 5/19/2017					
Dichlorodifluoromethane	ND	5.0	2.2							
Ethyl Acetate	ND	50	9.7							
Ethyl Ether	ND	50	7.3							
Ethyl tert-butyl ether	ND	5.0	1.4							
Ethylbenzene	ND	5.0	0.65							
Freon-113	ND	5.0	1.0							
Hexachlorobutadiene	ND	5.0	0.78							
Isopropylbenzene	ND	5.0	0.59							
m,p-Xylene	ND	10	1.2							
Methylene chloride	ND	5.0	1.4							
MTBE	ND	5.0	0.50							
n-Butylbenzene	ND	5.0	0.75							
n-Propylbenzene	ND	5.0	0.55							
Naphthalene	ND	5.0	1.2							
o-Xylene	ND	5.0	0.86							
sec-Butylbenzene	ND	5.0	0.79							
Styrene	ND	5.0	0.82							
tert-Amyl methyl ether	ND	5.0	1.5							
tert-Butanol	ND	100	5.9							
tert-Butylbenzene	ND	5.0	0.57							
Tetrachloroethene	ND	5.0	0.65							
Toluene	ND	5.0	0.80							
trans-1,2-Dichloroethene	ND	5.0	1.5							
trans-1,3-Dichloropropene	ND	5.0	0.63							
Trichloroethene	ND	5.0	1.1							
Trichlorofluoromethane	ND	5.0	0.89							
Vinyl acetate	ND	50	5.7							
Vinyl chloride	ND	5.0	2.0							
Surrogate: 1,2-Dichloroethane-d4	*57.13*			*50.0000*		*114*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*52.53*			*50.0000*		*105*	*23 - 162*			
Surrogate: Dibromofluoromethan	*49.83*			*50.0000*		*99.7*	*23 - 179*			
Surrogate: Toluene-d8	*52.22*			*50.0000*		*104*	*26 - 164*			
LCS (B7E0654-BS1)					Prepared: 5/19/2017 Analyzed: 5/19/2017					
1,1,1,2-Tetrachloroethane	47.9000	5.0	0.63	50.0000		95.8	78 - 119			
1,1,1-Trichloroethane	44.3800	5.0	0.63	50.0000		88.8	75 - 123			
1,1,2,2-Tetrachloroethane	47.8900	5.0	0.92	50.0000		95.8	65 - 117			
1,1,2-Trichloroethane	54.9900	5.0	1.4	50.0000		110	79 - 108			L3
1,1-Dichloroethane	42.7900	5.0	1.5	50.0000		85.6	69 - 120			
1,1-Dichloroethene	41.6100	5.0	0.69	50.0000		83.2	59 - 126			
1,1-Dichloropropene	42.8300	5.0	2.4	50.0000		85.7	76 - 121			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
LCS (B7E0654-BS1) - Continued					Prepared: 5/19/2017 Analyzed: 5/19/2017					
1,2,3-Trichloropropane	49.5000	5.0	1.2	50.0000		99.0	66 - 118			
1,2,3-Trichlorobenzene	53.2700	5.0	1.1	50.0000		107	75 - 116			
1,2,4-Trichlorobenzene	53.8100	5.0	0.96	50.0000		108	79 - 121			
1,2,4-Trimethylbenzene	45.7000	5.0	0.53	50.0000		91.4	80 - 118			
1,2-Dibromo-3-chloropropane	55.6800	10	1.1	50.0000		111	65 - 122			
1,2-Dibromoethane	57.8000	5.0	0.80	50.0000		116	77 - 115			L3
1,2-Dichlorobenzene	48.6700	5.0	0.51	50.0000		97.3	81 - 115			
1,2-Dichloroethane	57.5300	5.0	0.53	50.0000		115	70 - 122			
1,2-Dichloropropane	47.9300	5.0	0.76	50.0000		95.9	77 - 110			
1,3,5-Trimethylbenzene	43.6600	5.0	0.58	50.0000		87.3	79 - 119			
1,3-Dichlorobenzene	46.0000	5.0	0.63	50.0000		92.0	81 - 116			
1,3-Dichloropropane	52.4800	5.0	0.59	50.0000		105	79 - 113			
1,4-Dichlorobenzene	46.5400	5.0	0.73	50.0000		93.1	80 - 117			
2,2-Dichloropropane	44.6100	5.0	0.68	50.0000		89.2	70 - 129			
2-Chlorotoluene	43.4900	5.0	0.68	50.0000		87.0	76 - 119			
4-Chlorotoluene	44.6700	5.0	0.62	50.0000		89.3	79 - 119			
4-Isopropyltoluene	45.0100	5.0	0.63	50.0000		90.0	80 - 122			
Benzene	87.4900	5.0	0.59	100.000		87.5	79 - 111			
Bromobenzene	45.1900	5.0	1.9	50.0000		90.4	77 - 114			
Bromochloromethane	49.5200	5.0	3.1	50.0000		99.0	69 - 117			
Bromodichloromethane	51.9000	5.0	1.0	50.0000		104	79 - 114			
Bromoform	53.8400	5.0	0.70	50.0000		108	72 - 122			
Bromomethane	48.0200	5.0	4.2	50.0000		96.0	47 - 176			
Carbon disulfide	46.9700	5.0	1.2	50.0000		93.9	50 - 133			
Carbon tetrachloride	43.7800	5.0	1.1	50.0000		87.6	68 - 143			
Chlorobenzene	45.1200	5.0	0.64	50.0000		90.2	81 - 113			
Chloroethane	40.9600	5.0	1.9	50.0000		81.9	47 - 148			
Chloroform	46.4000	5.0	1.4	50.0000		92.8	77 - 116			
Chloromethane	64.2800	5.0	1.9	50.0000		129	39 - 141			
cis-1,2-Dichloroethene	45.0800	5.0	0.87	50.0000		90.2	68 - 120			
cis-1,3-Dichloropropene	49.2200	5.0	0.79	50.0000		98.4	74 - 113			
Di-isopropyl ether	46.5200	5.0	0.51	50.0000		93.0	62 - 124			
Dibromochloromethane	53.0400	5.0	1.0	50.0000		106	78 - 114			
Dibromomethane	51.9700	5.0	0.99	50.0000		104	74 - 112			
Dichlorodifluoromethane	46.6300	5.0	2.2	50.0000		93.3	49 - 138			
Ethyl Acetate	585.150	50	9.7	500.000		117	63 - 131			
Ethyl Ether	545.420	50	7.3	500.000		109	56 - 123			
Ethyl tert-butyl ether	50.0700	5.0	1.4	50.0000		100	68 - 121			
Ethylbenzene	88.0200	5.0	0.65	100.000		88.0	82 - 112			
Freon-113	46.0200	5.0	1.0	50.0000		92.0	65 - 133			
Hexachlorobutadiene	47.6700	5.0	0.78	50.0000		95.3	76 - 131			
Isopropylbenzene	41.3200	5.0	0.59	50.0000		82.6	77 - 122			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
LCS (B7E0654-BS1) - Continued					Prepared: 5/19/2017 Analyzed: 5/19/2017					
m,p-Xylene	92.0100	10	1.2	100.000		92.0	80 - 116			
Methylene chloride	43.0500	5.0	1.4	50.0000		86.1	67 - 144			
MTBE	53.8700	5.0	0.50	50.0000		108	62 - 120			
n-Butylbenzene	46.4500	5.0	0.75	50.0000		92.9	78 - 134			
n-Propylbenzene	42.1300	5.0	0.55	50.0000		84.3	77 - 125			
Naphthalene	53.7200	5.0	1.2	50.0000		107	66 - 125			
o-Xylene	91.3100	5.0	0.86	100.000		91.3	80 - 113			
sec-Butylbenzene	41.6300	5.0	0.79	50.0000		83.3	79 - 124			
Styrene	48.0000	5.0	0.82	50.0000		96.0	82 - 117			
tert-Amyl methyl ether	48.9800	5.0	1.5	50.0000		98.0	62 - 118			
tert-Butanol	272.600	100	5.9	250.000		109	35 - 127			
tert-Butylbenzene	42.1600	5.0	0.57	50.0000		84.3	78 - 121			
Tetrachloroethene	43.2600	5.0	0.65	50.0000		86.5	75 - 124			
Toluene	87.9000	5.0	0.80	100.000		87.9	79 - 115			
trans-1,2-Dichloroethene	39.6800	5.0	1.5	50.0000		79.4	65 - 127			
trans-1,3-Dichloropropene	53.7900	5.0	0.63	50.0000		108	73 - 115			
Trichloroethene	44.4100	5.0	1.1	50.0000		88.8	77 - 119			
Trichlorofluoromethane	49.9000	5.0	0.89	50.0000		99.8	57 - 134			
Vinyl acetate	554.620	50	5.7	500.000		111	62 - 147			
Vinyl chloride	50.9900	5.0	2.0	50.0000		102	53 - 133			
Surrogate: 1,2-Dichloroethane-d4	*60.01*			*50.0000*		*120*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*53.10*			*50.0000*		*106*	*23 - 162*			
Surrogate: Dibromofluoromethan	*50.75*			*50.0000*		*102*	*23 - 179*			
Surrogate: Toluene-d8	*50.37*			*50.0000*		*101*	*26 - 164*			
Matrix Spike (B7E0654-MS1)			**Source: 1702036-AO**		Prepared: 5/19/2017 Analyzed: 5/19/2017					
1,1,1,2-Tetrachloroethane	37.3500	5.0	0.63	50.0000	ND	74.7	45 - 124			
1,1,1-Trichloroethane	37.9200	5.0	0.63	50.0000	ND	75.8	53 - 125			
1,1,2,2-Tetrachloroethane	37.2700	5.0	0.92	50.0000	ND	74.5	42 - 117			
1,1,2-Trichloroethane	42.0100	5.0	1.4	50.0000	ND	84.0	48 - 120			
1,1-Dichloroethane	35.4500	5.0	1.5	50.0000	ND	70.9	54 - 116			
1,1-Dichloroethene	37.8900	5.0	0.69	50.0000	ND	75.8	47 - 123			
1,1-Dichloropropene	37.6700	5.0	2.4	50.0000	ND	75.3	48 - 126			
1,2,3-Trichloropropane	38.9400	5.0	1.2	50.0000	ND	77.9	46 - 118			
1,2,3-Trichlorobenzene	42.9800	5.0	1.1	50.0000	ND	86.0	1 - 132			
1,2,4-Trichlorobenzene	42.8200	5.0	0.96	50.0000	ND	85.6	2 - 138			
1,2,4-Trimethylbenzene	37.4700	5.0	0.53	50.0000	ND	74.9	32 - 129			
1,2-Dibromo-3-chloropropane	45.8500	10	1.1	50.0000	ND	91.7	34 - 130			
1,2-Dibromoethane	46.1600	5.0	0.80	50.0000	ND	92.3	45 - 125			
1,2-Dichlorobenzene	37.5000	5.0	0.51	50.0000	ND	75.0	25 - 130			
1,2-Dichloroethane	45.3900	5.0	0.53	50.0000	ND	90.8	51 - 119			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
Matrix Spike (B7E0654-MS1) - Continued			**Source: 1702036-AO**		Prepared: 5/19/2017 Analyzed: 5/19/2017					
1,2-Dichloropropane	37.0200	5.0	0.76	50.0000	ND	74.0	54 - 113			
1,3,5-Trimethylbenzene	36.4900	5.0	0.58	50.0000	ND	73.0	34 - 128			
1,3-Dichlorobenzene	36.6200	5.0	0.63	50.0000	ND	73.2	26 - 130			
1,3-Dichloropropane	41.5000	5.0	0.59	50.0000	ND	83.0	53 - 117			
1,4-Dichlorobenzene	37.3700	5.0	0.73	50.0000	ND	74.7	26 - 130			
2,2-Dichloropropane	37.6100	5.0	0.68	50.0000	ND	75.2	52 - 128			
2-Chlorotoluene	35.0500	5.0	0.68	50.0000	ND	70.1	34 - 126			
4-Chlorotoluene	35.7400	5.0	0.62	50.0000	ND	71.5	32 - 128			
4-Isopropyltoluene	37.4600	5.0	0.63	50.0000	ND	74.9	28 - 133			
Benzene	71.4500	5.0	0.59	100.000	ND	71.4	55 - 113			
Bromobenzene	34.6600	5.0	1.9	50.0000	ND	69.3	36 - 122			
Bromochloromethane	37.7900	5.0	3.1	50.0000	ND	75.6	50 - 118			
Bromodichloromethane	41.5500	5.0	1.0	50.0000	ND	83.1	51 - 117			
Bromoform	41.4800	5.0	0.70	50.0000	ND	83.0	39 - 130			
Bromomethane	40.8500	5.0	4.2	50.0000	ND	81.7	38 - 151			
Carbon disulfide	40.5300	5.0	1.2	50.0000	ND	81.1	38 - 126			
Carbon tetrachloride	37.4100	5.0	1.1	50.0000	ND	74.8	43 - 141			
Chlorobenzene	35.3400	5.0	0.64	50.0000	ND	70.7	42 - 122			
Chloroethane	35.2700	5.0	1.9	50.0000	ND	70.5	42 - 129			
Chloroform	37.1300	5.0	1.4	50.0000	ND	74.3	56 - 117			
Chloromethane	51.7000	5.0	1.9	50.0000	ND	103	35 - 127			
cis-1,2-Dichloroethene	34.2700	5.0	0.87	50.0000	ND	68.5	50 - 118			
cis-1,3-Dichloropropene	39.1500	5.0	0.79	50.0000	ND	78.3	45 - 118			
Di-isopropyl ether	36.4900	5.0	0.51	50.0000	ND	73.0	51 - 119			
Dibromochloromethane	41.0700	5.0	1.0	50.0000	ND	82.1	47 - 120			
Dibromomethane	41.0600	5.0	0.99	50.0000	ND	82.1	48 - 118			
Dichlorodifluoromethane	42.3300	5.0	2.2	50.0000	ND	84.7	43 - 126			
Ethyl Acetate	450.740	50	9.7	500.000	ND	90.1	22 - 145			
Ethyl Ether	429.550	50	7.3	500.000	ND	85.9	49 - 114			
Ethyl tert-butyl ether	38.4800	5.0	1.4	50.0000	ND	77.0	54 - 120			
Ethylbenzene	72.3000	5.0	0.65	100.000	ND	72.3	42 - 123			
Freon-113	41.0500	5.0	1.0	50.0000	ND	82.1	45 - 132			
Hexachlorobutadiene	41.2900	5.0	0.78	50.0000	ND	82.6	4 - 135			
Isopropylbenzene	34.8200	5.0	0.59	50.0000	ND	69.6	40 - 127			
m,p-Xylene	75.6600	10	1.2	100.000	ND	75.7	39 - 127			
Methylene chloride	33.9900	5.0	1.4	50.0000	ND	68.0	51 - 140			
MTBE	42.4200	5.0	0.50	50.0000	ND	84.8	52 - 120			
n-Butylbenzene	39.4200	5.0	0.75	50.0000	ND	78.8	19 - 141			
n-Propylbenzene	35.2300	5.0	0.55	50.0000	ND	70.5	34 - 131			
Naphthalene	43.5200	5.0	1.2	50.0000	ND	87.0	11 - 136			
o-Xylene	73.4900	5.0	0.86	100.000	ND	73.5	40 - 124			
sec-Butylbenzene	35.4500	5.0	0.79	50.0000	ND	70.9	29 - 132			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
Matrix Spike (B7E0654-MS1) - Continued			**Source: 1702036-AO**		Prepared: 5/19/2017 Analyzed: 5/19/2017					
Styrene	37.8700	5.0	0.82	50.0000	ND	75.7	36 - 130			
tert-Amyl methyl ether	37.7200	5.0	1.5	50.0000	ND	75.4	49 - 119			
tert-Butanol	236.700	100	5.9	250.000	ND	94.7	29 - 138			
tert-Butylbenzene	35.7000	5.0	0.57	50.0000	ND	71.4	34 - 129			
Tetrachloroethene	36.6400	5.0	0.65	50.0000	ND	73.3	37 - 132			
Toluene	73.4000	5.0	0.80	100.000	ND	73.4	48 - 122			
trans-1,2-Dichloroethene	33.7800	5.0	1.5	50.0000	ND	67.6	51 - 123			
trans-1,3-Dichloropropene	39.5200	5.0	0.63	50.0000	ND	79.0	38 - 125			
Trichloroethene	36.7400	5.0	1.1	50.0000	ND	73.5	41 - 136			
Trichlorofluoromethane	43.1600	5.0	0.89	50.0000	ND	86.3	44 - 126			
Vinyl acetate	436.910	50	5.7	500.000	ND	87.4	0 - 154			
Vinyl chloride	44.9200	5.0	2.0	50.0000	ND	89.8	47 - 122			
Surrogate: 1,2-Dichloroethane-d4	*58.64*			*50.0000*		*117*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*53.92*			*50.0000*		*108*	*23 - 162*			
Surrogate: Dibromofluoromethan	*52.45*			*50.0000*		*105*	*23 - 179*			
Surrogate: Toluene-d8	*51.54*			*50.0000*		*103*	*26 - 164*			
Matrix Spike Dup (B7E0654-MSD1)			**Source: 1702036-AO**		Prepared: 5/19/2017 Analyzed: 5/19/2017					
1,1,1,2-Tetrachloroethane	36.8300	5.0	0.63	50.0000	ND	73.7	45 - 124	1.40	20	
1,1,1-Trichloroethane	37.8500	5.0	0.63	50.0000	ND	75.7	53 - 125	0.185	20	
1,1,2,2-Tetrachloroethane	37.2500	5.0	0.92	50.0000	ND	74.5	42 - 117	0.0537	20	
1,1,2-Trichloroethane	40.7400	5.0	1.4	50.0000	ND	81.5	48 - 120	3.07	20	
1,1-Dichloroethane	36.6800	5.0	1.5	50.0000	ND	73.4	54 - 116	3.41	20	
1,1-Dichloroethene	36.8500	5.0	0.69	50.0000	ND	73.7	47 - 123	2.78	20	
1,1-Dichloropropene	36.1900	5.0	2.4	50.0000	ND	72.4	48 - 126	4.01	20	
1,2,3-Trichloropropane	38.9500	5.0	1.2	50.0000	ND	77.9	46 - 118	0.0257	20	
1,2,3-Trichlorobenzene	41.0100	5.0	1.1	50.0000	ND	82.0	1 - 132	4.69	20	
1,2,4-Trichlorobenzene	41.5900	5.0	0.96	50.0000	ND	83.2	2 - 138	2.91	20	
1,2,4-Trimethylbenzene	35.2300	5.0	0.53	50.0000	ND	70.5	32 - 129	6.16	20	
1,2-Dibromo-3-chloropropane	44.3200	10	1.1	50.0000	ND	88.6	34 - 130	3.39	20	
1,2-Dibromoethane	43.1300	5.0	0.80	50.0000	ND	86.3	45 - 125	6.79	20	
1,2-Dichlorobenzene	36.6900	5.0	0.51	50.0000	ND	73.4	25 - 130	2.18	20	
1,2-Dichloroethane	43.3500	5.0	0.53	50.0000	ND	86.7	51 - 119	4.60	20	
1,2-Dichloropropane	37.6500	5.0	0.76	50.0000	ND	75.3	54 - 113	1.69	20	
1,3,5-Trimethylbenzene	34.2900	5.0	0.58	50.0000	ND	68.6	34 - 128	6.22	20	
1,3-Dichlorobenzene	35.2700	5.0	0.63	50.0000	ND	70.5	26 - 130	3.76	20	
1,3-Dichloropropane	41.9000	5.0	0.59	50.0000	ND	83.8	53 - 117	0.959	20	
1,4-Dichlorobenzene	34.7300	5.0	0.73	50.0000	ND	69.5	26 - 130	7.32	20	
2,2-Dichloropropane	38.1600	5.0	0.68	50.0000	ND	76.3	52 - 128	1.45	20	
2-Chlorotoluene	33.5100	5.0	0.68	50.0000	ND	67.0	34 - 126	4.49	20	
4-Chlorotoluene	33.9500	5.0	0.62	50.0000	ND	67.9	32 - 128	5.14	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
Matrix Spike Dup (B7E0654-MSD1) - Continued			**Source: 1702036-AO**		Prepared: 5/19/2017 Analyzed: 5/19/2017					
4-Isopropyltoluene	35.1600	5.0	0.63	50.0000	ND	70.3	28 - 133	6.33	20	
Benzene	69.4100	5.0	0.59	100.000	ND	69.4	55 - 113	2.90	20	
Bromobenzene	34.9000	5.0	1.9	50.0000	ND	69.8	36 - 122	0.690	20	
Bromochloromethane	39.6300	5.0	3.1	50.0000	ND	79.3	50 - 118	4.75	20	
Bromodichloromethane	37.9100	5.0	1.0	50.0000	ND	75.8	51 - 117	9.16	20	
Bromoform	41.1000	5.0	0.70	50.0000	ND	82.2	39 - 130	0.920	20	
Bromomethane	40.6000	5.0	4.2	50.0000	ND	81.2	38 - 151	0.614	20	
Carbon disulfide	39.7800	5.0	1.2	50.0000	ND	79.6	38 - 126	1.87	20	
Carbon tetrachloride	35.0600	5.0	1.1	50.0000	ND	70.1	43 - 141	6.49	20	
Chlorobenzene	34.7000	5.0	0.64	50.0000	ND	69.4	42 - 122	1.83	20	
Chloroethane	34.6000	5.0	1.9	50.0000	ND	69.2	42 - 129	1.92	20	
Chloroform	38.0600	5.0	1.4	50.0000	ND	76.1	56 - 117	2.47	20	
Chloromethane	51.7600	5.0	1.9	50.0000	ND	104	35 - 127	0.116	20	
cis-1,2-Dichloroethene	35.6600	5.0	0.87	50.0000	ND	71.3	50 - 118	3.98	20	
cis-1,3-Dichloropropene	39.5800	5.0	0.79	50.0000	ND	79.2	45 - 118	1.09	20	
Di-isopropyl ether	37.8700	5.0	0.51	50.0000	ND	75.7	51 - 119	3.71	20	
Dibromochloromethane	40.4100	5.0	1.0	50.0000	ND	80.8	47 - 120	1.62	20	
Dibromomethane	13.0900	5.0	0.99	50.0000	ND	26.2	48 - 118	103	20	M1, R
Dichlorodifluoromethane	41.8100	5.0	2.2	50.0000	ND	83.6	43 - 126	1.24	20	
Ethyl Acetate	486.350	50	9.7	500.000	ND	97.3	22 - 145	7.60	20	
Ethyl Ether	453.850	50	7.3	500.000	ND	90.8	49 - 114	5.50	20	
Ethyl tert-butyl ether	40.7100	5.0	1.4	50.0000	ND	81.4	54 - 120	5.63	20	
Ethylbenzene	69.4000	5.0	0.65	100.000	ND	69.4	42 - 123	4.09	20	
Freon-113	42.2200	5.0	1.0	50.0000	ND	84.4	45 - 132	2.81	20	
Hexachlorobutadiene	38.9400	5.0	0.78	50.0000	ND	77.9	4 - 135	5.86	20	
Isopropylbenzene	32.4800	5.0	0.59	50.0000	ND	65.0	40 - 127	6.95	20	
m,p-Xylene	71.3100	10	1.2	100.000	ND	71.3	39 - 127	5.92	20	
Methylene chloride	35.6600	5.0	1.4	50.0000	ND	71.3	51 - 140	4.80	20	
MTBE	44.1700	5.0	0.50	50.0000	ND	88.3	52 - 120	4.04	20	
n-Butylbenzene	36.7800	5.0	0.75	50.0000	ND	73.6	19 - 141	6.93	20	
n-Propylbenzene	33.0000	5.0	0.55	50.0000	ND	66.0	34 - 131	6.54	20	
Naphthalene	41.6600	5.0	1.2	50.0000	ND	83.3	11 - 136	4.37	20	
o-Xylene	70.4100	5.0	0.86	100.000	ND	70.4	40 - 124	4.28	20	
sec-Butylbenzene	33.4100	5.0	0.79	50.0000	ND	66.8	29 - 132	5.93	20	
Styrene	36.8000	5.0	0.82	50.0000	ND	73.6	36 - 130	2.87	20	
tert-Amyl methyl ether	40.3800	5.0	1.5	50.0000	ND	80.8	49 - 119	6.81	20	
tert-Butanol	234.550	100	5.9	250.000	ND	93.8	29 - 138	0.912	20	
tert-Butylbenzene	33.3900	5.0	0.57	50.0000	ND	66.8	34 - 129	6.69	20	
Tetrachloroethene	34.9700	5.0	0.65	50.0000	ND	69.9	37 - 132	4.66	20	
Toluene	70.8100	5.0	0.80	100.000	ND	70.8	48 - 122	3.59	20	
trans-1,2-Dichloroethene	35.3900	5.0	1.5	50.0000	ND	70.8	51 - 123	4.66	20	
trans-1,3-Dichloropropene	39.5400	5.0	0.63	50.0000	ND	79.1	38 - 125	0.0506	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0654 - MSVOA_S (continued)										
Matrix Spike Dup (B7E0654-MSD1) - Continued			**Source: 1702036-AO**		Prepared: 5/19/2017 Analyzed: 5/19/2017					
Trichloroethene	35.5800	5.0	1.1	50.0000	ND	71.2	41 - 136	3.21	20	
Trichlorofluoromethane	42.3700	5.0	0.89	50.0000	ND	84.7	44 - 126	1.85	20	
Vinyl acetate	466.370	50	5.7	500.000	ND	93.3	0 - 154	6.52	20	
Vinyl chloride	44.7300	5.0	2.0	50.0000	ND	89.5	47 - 122	0.424	20	
Surrogate: 1,2-Dichloroethane-d4	*67.21*			*50.0000*		*134*	*12 - 186*			
Surrogate: 4-Bromofluorobenzene	*53.78*			*50.0000*		*108*	*23 - 162*			
Surrogate: Dibromofluoromethan	*55.14*			*50.0000*		*110*	*23 - 179*			
Surrogate: Toluene-d8	*52.05*			*50.0000*		*104*	*26 - 164*			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S										
Blank (B7E0747-BLK1)					Prepared: 5/22/2017 Analyzed: 5/22/2017					
1,2,4-Trichlorobenzene	ND	330	71							
1,2-Dichlorobenzene	ND	330	60							
1,3-Dichlorobenzene	ND	330	65							
1,4-Dichlorobenzene	ND	330	60							
2,4,5-Trichlorophenol	ND	330	61							
2,4,6-Trichlorophenol	ND	330	220							
2,4-Dichlorophenol	ND	1600	120							
2,4-Dimethylphenol	ND	330	120							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	46							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	59							
2-Chlorophenol	ND	330	120							
2-Methylnaphthalene	ND	330	67							
2-Methylphenol	ND	330	67							
2-Nitroaniline	ND	1600	200							
2-Nitrophenol	ND	330	110							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	44							
4,6-Dinitro-2-methyphenol	ND	1600	300							
4-Bromophenyl-phenylether	ND	330	50							
4-Chloro-3-methylphenol	ND	660	110							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	48							
4-Methylphenol	ND	330	66							
4-Nitroaniline	ND	1600	290							
4-Nitrophenol	ND	330	150							
Acenaphthene	ND	330	48							
Acenaphthylene	ND	330	51							
Anthracene	ND	330	49							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	39							
Benzo(a)pyrene	ND	330	45							
Benzo(b)fluoranthene	ND	330	55							
Benzo(g,h,i)perylene	ND	330	38							
Benzo(k)fluoranthene	ND	330	52							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	67							
bis(2-chloroethoxy)methane	ND	330	59							
bis(2-Chloroethyl)ether	ND	330	57							
bis(2-chloroisopropyl)ether	ND	330	65							

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
Blank (B7E0747-BLK1) - Continued					Prepared: 5/22/2017 Analyzed: 5/22/2017					
bis(2-ethylhexyl)phthalate	ND	330	83							
Butylbenzylphthalate	ND	330	250							
Chrysene	ND	330	43							
Di-n-butylphthalate	ND	330	230							
Di-n-octylphthalate	ND	330	48							
Dibenz(a,h)anthracene	ND	330	43							
Dibenzofuran	ND	330	55							
Diethyl phthalate	ND	330	47							
Dimethyl phthalate	ND	330	46							
Fluoranthene	ND	330	47							
Fluorene	ND	330	49							
Hexachlorobenzene	ND	330	41							
Hexachlorobutadiene	ND	660	61							
Hexachlorocyclopentadiene	ND	660	64							
Hexachloroethane	ND	330	71							
Indeno(1,2,3-cd)pyrene	ND	330	44							
Isophorone	ND	330	57							
N-Nitroso-di-n propylamine	ND	330	65							
N-Nitrosodiphenylamine	ND	330	48							
Naphthalene	ND	330	60							
Nitrobenzene	ND	330	67							
Pentachlorophenol	ND	1600	190							
Phenanthrene	ND	330	46							
Phenol	ND	330	130							
Pyrene	ND	330	53							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d	*2635*			*3333.33*		*79.0*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2693*			*3333.33*		*80.8*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*2753*			*3333.33*		*82.6*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2810*			*3333.33*		*84.3*	*44 - 100*			
Surrogate: 2-Fluorophenol	*2815*			*3333.33*		*84.5*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*3201*			*3333.33*		*96.0*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2860*			*3333.33*		*85.8*	*38 - 104*			
Surrogate: Phenol-d5	*2711*			*3333.33*		*81.3*	*35 - 95*			
LCS (B7E0747-BS1)					Prepared: 5/22/2017 Analyzed: 5/22/2017					
1,2,4-Trichlorobenzene	1917.33	330	71	3333.33		57.5	52 - 122			
1,2-Dichlorobenzene	1972.00	330	60	3333.33		59.2	46 - 118			
1,3-Dichlorobenzene	2008.67	330	65	3333.33		60.3	45 - 113			
1,4-Dichlorobenzene	1971.00	330	60	3333.33		59.1	46 - 113			
2,4,5-Trichlorophenol	2468.33	330	61	3333.33		74.0	65 - 126			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
LCS (B7E0747-BS1) - Continued					Prepared: 5/22/2017 Analyzed: 5/22/2017					
2,4,6-Trichlorophenol	2379.00	330	220	3333.33		71.4	61 - 119			
2,4-Dichlorophenol	2033.00	1600	120	3333.33		61.0	55 - 110			
2,4-Dimethylphenol	2282.67	330	120	3333.33		68.5	47 - 100			
2,4-Dinitrophenol	2435.67	1600	86	3333.33		73.1	37 - 186			
2,4-Dinitrotoluene	2891.00	330	46	3333.33		86.7	74 - 155			
2,6-Dinitrotoluene	2733.33	330	49	3333.33		82.0	62 - 169			
2-Chloronaphthalene	2258.67	330	59	3333.33		67.8	58 - 140			
2-Chlorophenol	2097.00	330	120	3333.33		62.9	45 - 96			
2-Methylnaphthalene	2198.00	330	67	3333.33		65.9	54 - 147			
2-Methylphenol	2188.67	330	67	3333.33		65.7	49 - 103			
2-Nitroaniline	3194.00	1600	200	3333.33		95.8	23 - 155			
2-Nitrophenol	2161.33	330	110	3333.33		64.8	54 - 112			
3,3´-Dichlorobenzidine	3520.67	660	280	3333.33		106	62 - 141			
3-Nitroaniline	3151.67	1600	44	3333.33		94.6	30 - 137			
4,6-Dinitro-2-methyphenol	2580.33	1600	300	3333.33		77.4	75 - 145			
4-Bromophenyl-phenylether	2624.67	330	50	3333.33		78.7	68 - 118			
4-Chloro-3-methylphenol	2394.00	660	110	3333.33		71.8	63 - 119			
4-Chloroaniline	2458.33	660	53	3333.33		73.8	19 - 127			
4-Chlorophenyl-phenylether	2278.00	330	48	3333.33		68.3	64 - 113			
4-Methylphenol	2304.33	330	66	3333.33		69.1	54 - 120			
4-Nitroaniline	2954.00	1600	290	3333.33		88.6	35 - 136			
4-Nitrophenol	2933.33	330	150	3333.33		88.0	52 - 160			
Acenaphthene	2451.33	330	48	3333.33		73.5	62 - 113			
Acenaphthylene	2453.00	330	51	3333.33		73.6	62 - 114			
Anthracene	2781.00	330	49	3333.33		83.4	71 - 129			
Benzidine (M)	4491.00	1600	1400	3333.33		135	45 - 184			
Benzo(a)anthracene	2826.33	330	39	3333.33		84.8	66 - 133			
Benzo(a)pyrene	2733.67	330	45	3333.33		82.0	71 - 133			
Benzo(b)fluoranthene	2619.67	330	55	3333.33		78.6	72 - 128			
Benzo(g,h,i)perylene	2642.00	330	38	3333.33		79.3	70 - 126			
Benzo(k)fluoranthene	2539.33	330	52	3333.33		76.2	70 - 136			
Benzoic acid	1755.00	1600	890	3333.33		52.7	11 - 108			
Benzyl alcohol	2326.33	660	67	3333.33		69.8	57 - 143			
bis(2-chloroethoxy)methane	2101.00	330	59	3333.33		63.0	51 - 99			
bis(2-Chloroethyl)ether	2000.33	330	57	3333.33		60.0	46 - 101			
bis(2-chloroisopropyl)ether	1651.33	330	65	3333.33		49.5	28 - 126			
bis(2-ethylhexyl)phthalate	3444.33	330	83	3333.33		103	49 - 134			
Butylbenzylphthalate	3334.00	330	250	3333.33		100	54 - 137			
Chrysene	2783.67	330	43	3333.33		83.5	70 - 125			
Di-n-butylphthalate	3473.33	330	230	3333.33		104	59 - 152			
Di-n-octylphthalate	3200.67	330	48	3333.33		96.0	50 - 146			
Dibenz(a,h)anthracene	2778.33	330	43	3333.33		83.4	59 - 141			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
LCS (B7E0747-BS1) - Continued					Prepared: 5/22/2017 Analyzed: 5/22/2017					
Dibenzofuran	2591.00	330	55	3333.33		77.7	58 - 158			
Diethyl phthalate	2908.67	330	47	3333.33		87.3	68 - 136			
Dimethyl phthalate	2726.33	330	46	3333.33		81.8	69 - 124			
Fluoranthene	2575.33	330	47	3333.33		77.3	72 - 128			
Fluorene	2360.33	330	49	3333.33		70.8	67 - 118			
Hexachlorobenzene	2628.67	330	41	3333.33		78.9	61 - 155			
Hexachlorobutadiene	1870.33	660	61	3333.33		56.1	44 - 111			
Hexachlorocyclopentadiene	2410.67	660	64	3333.33		72.3	46 - 138			
Hexachloroethane	2153.00	330	71	3333.33		64.6	40 - 129			
Indeno(1,2,3-cd)pyrene	2794.33	330	44	3333.33		83.8	63 - 142			
Isophorone	2271.00	330	57	3333.33		68.1	55 - 106			
N-Nitroso-di-n propylamine	2178.00	330	65	3333.33		65.3	50 - 117			
N-Nitrosodiphenylamine	2955.33	330	48	3333.33		88.7	70 - 137			
Naphthalene	2073.33	330	60	3333.33		62.2	54 - 106			
Nitrobenzene	2150.33	330	67	3333.33		64.5	57 - 134			
Pentachlorophenol	2378.33	1600	190	3333.33		71.4	53 - 115			
Phenanthrene	2683.33	330	46	3333.33		80.5	70 - 129			
Phenol	1964.67	330	130	3333.33		58.9	47 - 105			
Pyrene	2552.33	330	53	3333.33		76.6	73 - 131			
Pyridine	2071.00	1600	270	3333.33		62.1	40 - 91			
Surrogate: 1,2-Dichlorobenzene-d	*1917*			*3333.33*		*57.5*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2394*			*3333.33*		*71.8*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*2102*			*3333.33*		*63.1*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2247*			*3333.33*		*67.4*	*44 - 100*			
Surrogate: 2-Fluorophenol	*2044*			*3333.33*		*61.3*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2814*			*3333.33*		*84.4*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2205*			*3333.33*		*66.2*	*38 - 104*			
Surrogate: Phenol-d5	*2051*			*3333.33*		*61.5*	*35 - 95*			
Matrix Spike (B7E0747-MS1)			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
1,2,4-Trichlorobenzene	2048.33	330	71	3333.33	ND	61.4	40 - 127			
1,2-Dichlorobenzene	2177.67	330	60	3333.33	ND	65.3	36 - 125			
1,3-Dichlorobenzene	2164.00	330	65	3333.33	ND	64.9	35 - 119			
1,4-Dichlorobenzene	2198.33	330	60	3333.33	ND	66.0	36 - 120			
2,4,5-Trichlorophenol	2612.67	330	61	3333.33	ND	78.4	42 - 135			
2,4,6-Trichlorophenol	2519.33	330	220	3333.33	ND	75.6	46 - 121			
2,4-Dichlorophenol	2237.00	1600	120	3333.33	ND	67.1	43 - 114			
2,4-Dimethylphenol	2491.67	330	120	3333.33	ND	74.8	37 - 105			
2,4-Dinitrophenol	2060.67	1600	86	3333.33	ND	61.8	17 - 177			
2,4-Dinitrotoluene	2876.00	330	46	3333.33	ND	86.3	50 - 166			
2,6-Dinitrotoluene	2716.67	330	49	3333.33	ND	81.5	43 - 169			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
Matrix Spike (B7E0747-MS1) - Continued			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
2-Chloronaphthalene	2496.67	330	59	3333.33	ND	74.9	44 - 144			
2-Chlorophenol	2344.33	330	120	3333.33	ND	70.3	38 - 99			
2-Methylnaphthalene	2415.67	330	67	3333.33	ND	72.5	41 - 151			
2-Methylphenol	2438.67	330	67	3333.33	ND	73.2	37 - 108			
2-Nitroaniline	3255.67	1600	200	3333.33	ND	97.7	13 - 155			
2-Nitrophenol	2355.67	330	110	3333.33	ND	70.7	24 - 142			
3,3´-Dichlorobenzidine	3471.00	660	280	3333.33	ND	104	31 - 153			
3-Nitroaniline	3085.00	1600	44	3333.33	ND	92.6	7 - 147			
4,6-Dinitro-2-methyphenol	2490.00	1600	300	3333.33	ND	74.7	45 - 155			
4-Bromophenyl-phenylether	2588.67	330	50	3333.33	ND	77.7	45 - 122			
4-Chloro-3-methylphenol	2491.33	660	110	3333.33	ND	74.7	45 - 124			
4-Chloroaniline	2642.00	660	53	3333.33	ND	79.3	12 - 117			
4-Chlorophenyl-phenylether	2304.67	330	48	3333.33	ND	69.1	45 - 115			
4-Methylphenol	2499.67	330	66	3333.33	ND	75.0	39 - 125			
4-Nitroaniline	2909.67	1600	290	3333.33	ND	87.3	22 - 135			
4-Nitrophenol	2783.00	330	150	3333.33	ND	83.5	27 - 161			
Acenaphthene	2634.00	330	48	3333.33	ND	79.0	47 - 114			
Acenaphthylene	2594.67	330	51	3333.33	ND	77.8	45 - 117			
Anthracene	2730.00	330	49	3333.33	ND	81.9	47 - 130			
Benzidine (M)	3579.33	1600	1400	3333.33	ND	107	8 - 179			
Benzo(a)anthracene	2681.00	330	39	3333.33	ND	80.4	46 - 130			
Benzo(a)pyrene	2707.33	330	45	3333.33	ND	81.2	46 - 131			
Benzo(b)fluoranthene	2622.00	330	55	3333.33	ND	78.7	44 - 130			
Benzo(g,h,i)perylene	2627.67	330	38	3333.33	ND	78.8	48 - 125			
Benzo(k)fluoranthene	2496.00	330	52	3333.33	ND	74.9	46 - 132			
Benzoic acid	990.667	1600	890	3333.33	ND	29.7	0 - 121			
Benzyl alcohol	2562.33	660	67	3333.33	ND	76.9	32 - 156			
bis(2-chloroethoxy)methane	2298.33	330	59	3333.33	ND	69.0	42 - 100			
bis(2-Chloroethyl)ether	2178.67	330	57	3333.33	ND	65.4	39 - 104			
bis(2-chloroisopropyl)ether	1855.33	330	65	3333.33	ND	55.7	26 - 125			
bis(2-ethylhexyl)phthalate	3404.00	330	83	3333.33	ND	102	20 - 159			
Butylbenzylphthalate	3330.00	330	250	3333.33	ND	99.9	19 - 171			
Chrysene	2617.33	330	43	3333.33	ND	78.5	52 - 123			
Di-n-butylphthalate	3634.00	330	230	3333.33	ND	109	40 - 156			
Di-n-octylphthalate	3349.67	330	48	3333.33	ND	100	31 - 156			
Dibenz(a,h)anthracene	2810.67	330	43	3333.33	ND	84.3	31 - 149			
Dibenzofuran	2696.00	330	55	3333.33	ND	80.9	43 - 157			
Diethyl phthalate	2982.67	330	47	3333.33	ND	89.5	42 - 138			
Dimethyl phthalate	2723.33	330	46	3333.33	ND	81.7	44 - 127			
Fluoranthene	2570.67	330	47	3333.33	ND	77.1	46 - 131			
Fluorene	2440.67	330	49	3333.33	ND	73.2	48 - 120			
Hexachlorobenzene	2522.33	330	41	3333.33	ND	75.7	37 - 158			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
Matrix Spike (B7E0747-MS1) - Continued			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
Hexachlorobutadiene	2030.00	660	61	3333.33	ND	60.9	37 - 114			
Hexachlorocyclopentadiene	2652.00	660	64	3333.33	ND	79.6	29 - 146			
Hexachloroethane	2329.33	330	71	3333.33	ND	69.9	31 - 135			
Indeno(1,2,3-cd)pyrene	2804.67	330	44	3333.33	ND	84.1	36 - 148			
Isophorone	2417.00	330	57	3333.33	ND	72.5	36 - 112			
N-Nitroso-di-n propylamine	2419.00	330	65	3333.33	ND	72.6	37 - 120			
N-Nitrosodiphenylamine	2884.67	330	48	3333.33	ND	86.5	44 - 141			
Naphthalene	2287.67	330	60	3333.33	ND	68.6	47 - 106			
Nitrobenzene	2308.67	330	67	3333.33	ND	69.3	44 - 139			
Pentachlorophenol	2337.67	1600	190	3333.33	ND	70.1	32 - 128			
Phenanthrene	2626.33	330	46	3333.33	ND	78.8	49 - 129			
Phenol	2162.00	330	130	3333.33	ND	64.9	40 - 107			
Pyrene	2570.67	330	53	3333.33	ND	77.1	47 - 134			
Pyridine	2009.67	1600	270	3333.33	ND	60.3	24 - 99			
Surrogate: 1,2-Dichlorobenzene-d	*2110*			*3333.33*		*63.3*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2400*			*3333.33*		*72.0*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*2331*			*3333.33*		*69.9*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2483*			*3333.33*		*74.5*	*44 - 100*			
Surrogate: 2-Fluorophenol	*2215*			*3333.33*		*66.5*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2709*			*3333.33*		*81.3*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2430*			*3333.33*		*72.9*	*38 - 104*			
Surrogate: Phenol-d5	*2260*			*3333.33*		*67.8*	*35 - 95*			
Matrix Spike Dup (B7E0747-MSD1)			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
1,2,4-Trichlorobenzene	1852.33	330	71	3333.33	ND	55.6	40 - 127	10.0	20	
1,2-Dichlorobenzene	1931.00	330	60	3333.33	ND	57.9	36 - 125	12.0	20	
1,3-Dichlorobenzene	1947.00	330	65	3333.33	ND	58.4	35 - 119	10.6	20	
1,4-Dichlorobenzene	1942.67	330	60	3333.33	ND	58.3	36 - 120	12.3	20	
2,4,5-Trichlorophenol	2294.67	330	61	3333.33	ND	68.8	42 - 135	13.0	20	
2,4,6-Trichlorophenol	2192.33	330	220	3333.33	ND	65.8	46 - 121	13.9	20	
2,4-Dichlorophenol	1963.00	1600	120	3333.33	ND	58.9	43 - 114	13.0	20	
2,4-Dimethylphenol	2205.00	330	120	3333.33	ND	66.2	37 - 105	12.2	20	
2,4-Dinitrophenol	1751.67	1600	86	3333.33	ND	52.6	17 - 177	16.2	20	
2,4-Dinitrotoluene	2492.67	330	46	3333.33	ND	74.8	50 - 166	14.3	20	
2,6-Dinitrotoluene	2434.00	330	49	3333.33	ND	73.0	43 - 169	11.0	20	
2-Chloronaphthalene	2176.00	330	59	3333.33	ND	65.3	44 - 144	13.7	20	
2-Chlorophenol	2045.67	330	120	3333.33	ND	61.4	38 - 99	13.6	20	
2-Methylnaphthalene	2164.00	330	67	3333.33	ND	64.9	41 - 151	11.0	20	
2-Methylphenol	2167.00	330	67	3333.33	ND	65.0	37 - 108	11.8	20	
2-Nitroaniline	2919.67	1600	200	3333.33	ND	87.6	13 - 155	10.9	20	
2-Nitrophenol	2138.00	330	110	3333.33	ND	64.1	24 - 142	9.69	20	

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
Matrix Spike Dup (B7E0747-MSD1) - Continued			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
3,3´-Dichlorobenzidine	3076.33	660	280	3333.33	ND	92.3	31 - 153	12.1	20	
3-Nitroaniline	2751.00	1600	44	3333.33	ND	82.5	7 - 147	11.4	20	
4,6-Dinitro-2-methyphenol	2246.00	1600	300	3333.33	ND	67.4	45 - 155	10.3	20	
4-Bromophenyl-phenylether	2273.33	330	50	3333.33	ND	68.2	45 - 122	13.0	20	
4-Chloro-3-methylphenol	2271.00	660	110	3333.33	ND	68.1	45 - 124	9.25	20	
4-Chloroaniline	2366.33	660	53	3333.33	ND	71.0	12 - 117	11.0	20	
4-Chlorophenyl-phenylether	2030.00	330	48	3333.33	ND	60.9	45 - 115	12.7	20	
4-Methylphenol	2200.67	330	66	3333.33	ND	66.0	39 - 125	12.7	20	
4-Nitroaniline	2634.67	1600	290	3333.33	ND	79.0	22 - 135	9.92	20	
4-Nitrophenol	2520.67	330	150	3333.33	ND	75.6	27 - 161	9.89	20	
Acenaphthene	2280.00	330	48	3333.33	ND	68.4	47 - 114	14.4	20	
Acenaphthylene	2286.00	330	51	3333.33	ND	68.6	45 - 117	12.6	20	
Anthracene	2447.67	330	49	3333.33	ND	73.4	47 - 130	10.9	20	
Benzidine (M)	3081.33	1600	1400	3333.33	ND	92.4	8 - 179	15.0	20	
Benzo(a)anthracene	2445.33	330	39	3333.33	ND	73.4	46 - 130	9.19	20	
Benzo(a)pyrene	2473.33	330	45	3333.33	ND	74.2	46 - 131	9.03	20	
Benzo(b)fluoranthene	2335.33	330	55	3333.33	ND	70.1	44 - 130	11.6	20	
Benzo(g,h,i)perylene	2410.33	330	38	3333.33	ND	72.3	48 - 125	8.63	20	
Benzo(k)fluoranthene	2219.33	330	52	3333.33	ND	66.6	46 - 132	11.7	20	
Benzoic acid	ND	1600	890	3333.33	ND	NR	0 - 121	NR	20	
Benzyl alcohol	2301.33	660	67	3333.33	ND	69.0	32 - 156	10.7	20	
bis(2-chloroethoxy)methane	2040.33	330	59	3333.33	ND	61.2	42 - 100	11.9	20	
bis(2-Chloroethyl)ether	1991.67	330	57	3333.33	ND	59.8	39 - 104	8.97	20	
bis(2-chloroisopropyl)ether	1592.67	330	65	3333.33	ND	47.8	26 - 125	15.2	20	
bis(2-ethylhexyl)phthalate	3061.00	330	83	3333.33	ND	91.8	20 - 159	10.6	20	
Butylbenzylphthalate	2945.00	330	250	3333.33	ND	88.4	19 - 171	12.3	20	
Chrysene	2380.67	330	43	3333.33	ND	71.4	52 - 123	9.47	20	
Di-n-butylphthalate	3231.67	330	230	3333.33	ND	97.0	40 - 156	11.7	20	
Di-n-octylphthalate	2949.33	330	48	3333.33	ND	88.5	31 - 156	12.7	20	
Dibenz(a,h)anthracene	2524.33	330	43	3333.33	ND	75.7	31 - 149	10.7	20	
Dibenzofuran	2382.33	330	55	3333.33	ND	71.5	43 - 157	12.4	20	
Diethyl phthalate	2649.67	330	47	3333.33	ND	79.5	42 - 138	11.8	20	
Dimethyl phthalate	2425.00	330	46	3333.33	ND	72.8	44 - 127	11.6	20	
Fluoranthene	2261.67	330	47	3333.33	ND	67.9	46 - 131	12.8	20	
Fluorene	2136.67	330	49	3333.33	ND	64.1	48 - 120	13.3	20	
Hexachlorobenzene	2183.33	330	41	3333.33	ND	65.5	37 - 158	14.4	20	
Hexachlorobutadiene	1848.67	660	61	3333.33	ND	55.5	37 - 114	9.35	20	
Hexachlorocyclopentadiene	2288.00	660	64	3333.33	ND	68.6	29 - 146	14.7	20	
Hexachloroethane	2162.33	330	71	3333.33	ND	64.9	31 - 135	7.44	20	
Indeno(1,2,3-cd)pyrene	2535.67	330	44	3333.33	ND	76.1	36 - 148	10.1	20	
Isophorone	2189.33	330	57	3333.33	ND	65.7	36 - 112	9.88	20	
N-Nitroso-di-n propylamine	2157.33	330	65	3333.33	ND	64.7	37 - 120	11.4	20	

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0747 - MSSEMI_S (continued)										
Matrix Spike Dup (B7E0747-MSD1) - Continued			**Source: 1702036-22**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
N-Nitrosodiphenylamine	2615.67	330	48	3333.33	ND	78.5	44 - 141	9.78	20	
Naphthalene	2025.67	330	60	3333.33	ND	60.8	47 - 106	12.1	20	
Nitrobenzene	2142.33	330	67	3333.33	ND	64.3	44 - 139	7.47	20	
Pentachlorophenol	2039.33	1600	190	3333.33	ND	61.2	32 - 128	13.6	20	
Phenanthrene	2373.33	330	46	3333.33	ND	71.2	49 - 129	10.1	20	
Phenol	1921.67	330	130	3333.33	ND	57.7	40 - 107	11.8	20	
Pyrene	2292.67	330	53	3333.33	ND	68.8	47 - 134	11.4	20	
Pyridine	1852.00	1600	270	3333.33	ND	55.6	24 - 99	8.17	20	
Surrogate: 1,2-Dichlorobenzene-d	*1885*			*3333.33*		*56.5*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2113*			*3333.33*		*63.4*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*2066*			*3333.33*		*62.0*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2168*			*3333.33*		*65.0*	*44 - 100*			
Surrogate: 2-Fluorophenol	*2003*			*3333.33*		*60.1*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2399*			*3333.33*		*72.0*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2231*			*3333.33*		*66.9*	*38 - 104*			
Surrogate: Phenol-d5	*1995*			*3333.33*		*59.8*	*35 - 95*			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S										
Blank (B7E0781-BLK1)					Prepared: 5/23/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	ND	330	71							
1,2-Dichlorobenzene	ND	330	60							
1,3-Dichlorobenzene	ND	330	65							
1,4-Dichlorobenzene	ND	330	60							
2,4,5-Trichlorophenol	ND	330	61							
2,4,6-Trichlorophenol	ND	330	220							
2,4-Dichlorophenol	ND	1600	120							
2,4-Dimethylphenol	ND	330	120							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	46							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	59							
2-Chlorophenol	ND	330	120							
2-Methylnaphthalene	ND	330	67							
2-Methylphenol	ND	330	67							
2-Nitroaniline	ND	1600	200							
2-Nitrophenol	ND	330	110							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	44							
4,6-Dinitro-2-methyphenol	ND	1600	300							
4-Bromophenyl-phenylether	ND	330	50							
4-Chloro-3-methylphenol	ND	660	110							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	48							
4-Methylphenol	ND	330	66							
4-Nitroaniline	ND	1600	290							
4-Nitrophenol	ND	330	150							
Acenaphthene	ND	330	48							
Acenaphthylene	ND	330	51							
Anthracene	ND	330	49							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	39							
Benzo(a)pyrene	ND	330	45							
Benzo(b)fluoranthene	ND	330	55							
Benzo(g,h,i)perylene	ND	330	38							
Benzo(k)fluoranthene	ND	330	52							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	67							
bis(2-chloroethoxy)methane	ND	330	59							
bis(2-Chloroethyl)ether	ND	330	57							
bis(2-chloroisopropyl)ether	ND	330	65							

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
Blank (B7E0781-BLK1) - Continued					Prepared: 5/23/2017 Analyzed: 5/31/2017					
bis(2-ethylhexyl)phthalate	ND	330	83							
Butylbenzylphthalate	ND	330	250							
Chrysene	ND	330	43							
Di-n-butylphthalate	ND	330	230							
Di-n-octylphthalate	ND	330	48							
Dibenz(a,h)anthracene	ND	330	43							
Dibenzofuran	ND	330	55							
Diethyl phthalate	ND	330	47							
Dimethyl phthalate	ND	330	46							
Fluoranthene	ND	330	47							
Fluorene	ND	330	49							
Hexachlorobenzene	ND	330	41							
Hexachlorobutadiene	ND	660	61							
Hexachlorocyclopentadiene	ND	660	64							
Hexachloroethane	ND	330	71							
Indeno(1,2,3-cd)pyrene	ND	330	44							
Isophorone	ND	330	57							
N-Nitroso-di-n propylamine	ND	330	65							
N-Nitrosodiphenylamine	ND	330	48							
Naphthalene	ND	330	60							
Nitrobenzene	ND	330	67							
Pentachlorophenol	ND	1600	190							
Phenanthrene	ND	330	46							
Phenol	ND	330	130							
Pyrene	ND	330	53							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d	*1904*			*3333.33*		*57.1*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2309*			*3333.33*		*69.3*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1959*			*3333.33*		*58.8*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2237*			*3333.33*		*67.1*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1881*			*3333.33*		*56.4*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2550*			*3333.33*		*76.5*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2005*			*3333.33*		*60.2*	*38 - 104*			
Surrogate: Phenol-d5	*1957*			*3333.33*		*58.7*	*35 - 95*			
LCS (B7E0781-BS1)					Prepared: 5/23/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	2642.00	330	71	3333.33		79.3	52 - 122			
1,2-Dichlorobenzene	2339.33	330	60	3333.33		70.2	46 - 118			
1,3-Dichlorobenzene	2323.33	330	65	3333.33		69.7	45 - 113			
1,4-Dichlorobenzene	2321.00	330	60	3333.33		69.6	46 - 113			
2,4,5-Trichlorophenol	3044.67	330	61	3333.33		91.3	65 - 126			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
LCS (B7E0781-BS1) - Continued					Prepared: 5/23/2017 Analyzed: 5/31/2017					
2,4,6-Trichlorophenol	2706.00	330	220	3333.33		81.2	61 - 119			
2,4-Dichlorophenol	2416.33	1600	120	3333.33		72.5	55 - 110			
2,4-Dimethylphenol	1951.33	330	120	3333.33		58.5	47 - 100			
2,4-Dinitrophenol	2672.67	1600	86	3333.33		80.2	37 - 186			
2,4-Dinitrotoluene	3413.33	330	46	3333.33		102	74 - 155			
2,6-Dinitrotoluene	3273.67	330	49	3333.33		98.2	62 - 169			
2-Chloronaphthalene	2887.00	330	59	3333.33		86.6	58 - 140			
2-Chlorophenol	2020.67	330	120	3333.33		60.6	45 - 96			
2-Methylnaphthalene	3203.00	330	67	3333.33		96.1	54 - 147			
2-Methylphenol	2256.33	330	67	3333.33		67.7	49 - 103			
2-Nitroaniline	3160.33	1600	200	3333.33		94.8	23 - 155			
2-Nitrophenol	2387.00	330	110	3333.33		71.6	54 - 112			
3,3´-Dichlorobenzidine	2990.67	660	280	3333.33		89.7	62 - 141			
3-Nitroaniline	2969.00	1600	44	3333.33		89.1	30 - 137			
4,6-Dinitro-2-methyphenol	2819.33	1600	300	3333.33		84.6	75 - 145			
4-Bromophenyl-phenylether	2782.00	330	50	3333.33		83.5	68 - 118			
4-Chloro-3-methylphenol	2709.33	660	110	3333.33		81.3	63 - 119			
4-Chloroaniline	2699.33	660	53	3333.33		81.0	19 - 127			
4-Chlorophenyl-phenylether	2645.00	330	48	3333.33		79.4	64 - 113			
4-Methylphenol	2595.67	330	66	3333.33		77.9	54 - 120			
4-Nitroaniline	2841.33	1600	290	3333.33		85.2	35 - 136			
4-Nitrophenol	2745.33	330	150	3333.33		82.4	52 - 160			
Acenaphthene	2317.00	330	48	3333.33		69.5	62 - 113			
Acenaphthylene	2345.00	330	51	3333.33		70.4	62 - 114			
Anthracene	2590.67	330	49	3333.33		77.7	71 - 129			
Benzidine (M)	1690.00	1600	1400	3333.33		50.7	45 - 184			
Benzo(a)anthracene	2517.00	330	39	3333.33		75.5	66 - 133			
Benzo(a)pyrene	2601.33	330	45	3333.33		78.0	71 - 133			
Benzo(b)fluoranthene	2452.33	330	55	3333.33		73.6	72 - 128			
Benzo(g,h,i)perylene	2534.00	330	38	3333.33		76.0	70 - 126			
Benzo(k)fluoranthene	2479.33	330	52	3333.33		74.4	70 - 136			
Benzoic acid	1930.33	1600	890	3333.33		57.9	11 - 108			
Benzyl alcohol	3109.33	660	67	3333.33		93.3	57 - 143			
bis(2-chloroethoxy)methane	2246.67	330	59	3333.33		67.4	51 - 99			
bis(2-Chloroethyl)ether	2003.00	330	57	3333.33		60.1	46 - 101			
bis(2-chloroisopropyl)ether	1968.33	330	65	3333.33		59.0	28 - 126			
bis(2-ethylhexyl)phthalate	2422.33	330	83	3333.33		72.7	49 - 134			
Butylbenzylphthalate	2728.00	330	250	3333.33		81.8	54 - 137			
Chrysene	2529.67	330	43	3333.33		75.9	70 - 125			
Di-n-butylphthalate	2789.00	330	230	3333.33		83.7	59 - 152			
Di-n-octylphthalate	2659.33	330	48	3333.33		79.8	50 - 146			
Dibenz(a,h)anthracene	2590.67	330	43	3333.33		77.7	59 - 141			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
LCS (B7E0781-BS1) - Continued					Prepared: 5/23/2017 Analyzed: 5/31/2017					
Dibenzofuran	3369.00	330	55	3333.33		101	58 - 158			
Diethyl phthalate	2652.33	330	47	3333.33		79.6	68 - 136			
Dimethyl phthalate	2381.33	330	46	3333.33		71.4	69 - 124			
Fluoranthene	2662.33	330	47	3333.33		79.9	72 - 128			
Fluorene	2365.33	330	49	3333.33		71.0	67 - 118			
Hexachlorobenzene	3285.33	330	41	3333.33		98.6	61 - 155			
Hexachlorobutadiene	2428.67	660	61	3333.33		72.9	44 - 111			
Hexachlorocyclopentadiene	3318.67	660	64	3333.33		99.6	46 - 138			
Hexachloroethane	2458.00	330	71	3333.33		73.7	40 - 129			
Indeno(1,2,3-cd)pyrene	2678.33	330	44	3333.33		80.4	63 - 142			
Isophorone	2293.33	330	57	3333.33		68.8	55 - 106			
N-Nitroso-di-n propylamine	2327.67	330	65	3333.33		69.8	50 - 117			
N-Nitrosodiphenylamine	2648.67	330	48	3333.33		79.5	70 - 137			
Naphthalene	2127.67	330	60	3333.33		63.8	54 - 106			
Nitrobenzene	2693.33	330	67	3333.33		80.8	57 - 134			
Pentachlorophenol	2898.67	1600	190	3333.33		87.0	53 - 115			
Phenanthrene	2563.67	330	46	3333.33		76.9	70 - 129			
Phenol	2112.33	330	130	3333.33		63.4	47 - 105			
Pyrene	2658.67	330	53	3333.33		79.8	73 - 131			
Pyridine	1759.00	1600	270	3333.33		52.8	40 - 91			
Surrogate: 1,2-Dichlorobenzene-d	*1884*			*3333.33*		*56.5*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2551*			*3333.33*		*76.5*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1908*			*3333.33*		*57.2*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2221*			*3333.33*		*66.6*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1801*			*3333.33*		*54.0*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2421*			*3333.33*		*72.6*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2164*			*3333.33*		*64.9*	*38 - 104*			
Surrogate: Phenol-d5	*2013*			*3333.33*		*60.4*	*35 - 95*			
Matrix Spike (B7E0781-MS1)			**Source: 1702036-87**		Prepared: 5/23/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	2260.67	330	71	3333.33	ND	67.8	40 - 127			
1,2-Dichlorobenzene	2030.67	330	60	3333.33	ND	60.9	36 - 125			
1,3-Dichlorobenzene	1986.67	330	65	3333.33	ND	59.6	35 - 119			
1,4-Dichlorobenzene	2007.67	330	60	3333.33	ND	60.2	36 - 120			
2,4,5-Trichlorophenol	2522.67	330	61	3333.33	ND	75.7	42 - 135			
2,4,6-Trichlorophenol	2240.33	330	220	3333.33	ND	67.2	46 - 121			
2,4-Dichlorophenol	2080.00	1600	120	3333.33	ND	62.4	43 - 114			
2,4-Dimethylphenol	1713.67	330	120	3333.33	ND	51.4	37 - 105			
2,4-Dinitrophenol	2182.00	1600	86	3333.33	ND	65.5	17 - 177			
2,4-Dinitrotoluene	2833.33	330	46	3333.33	ND	85.0	50 - 166			
2,6-Dinitrotoluene	2712.00	330	49	3333.33	ND	81.4	43 - 169			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
Matrix Spike (B7E0781-MS1) - Continued			**Source: 1702036-87**		Prepared: 5/23/2017 Analyzed: 5/31/2017					
2-Chloronaphthalene	2440.00	330	59	3333.33	ND	73.2	44 - 144			
2-Chlorophenol	1692.33	330	120	3333.33	ND	50.8	38 - 99			
2-Methylnaphthalene	2710.00	330	67	3333.33	ND	81.3	41 - 151			
2-Methylphenol	1912.00	330	67	3333.33	ND	57.4	37 - 108			
2-Nitroaniline	2632.33	1600	200	3333.33	ND	79.0	13 - 155			
2-Nitrophenol	2033.00	330	110	3333.33	ND	61.0	24 - 142			
3,3´-Dichlorobenzidine	2545.67	660	280	3333.33	ND	76.4	31 - 153			
3-Nitroaniline	2416.67	1600	44	3333.33	ND	72.5	7 - 147			
4,6-Dinitro-2-methyphenol	2367.00	1600	300	3333.33	ND	71.0	45 - 155			
4-Bromophenyl-phenylether	2317.00	330	50	3333.33	ND	69.5	45 - 122			
4-Chloro-3-methylphenol	2163.67	660	110	3333.33	ND	64.9	45 - 124			
4-Chloroaniline	2219.33	660	53	3333.33	ND	66.6	12 - 117			
4-Chlorophenyl-phenylether	2230.33	330	48	3333.33	ND	66.9	45 - 115			
4-Methylphenol	2180.67	330	66	3333.33	ND	65.4	39 - 125			
4-Nitroaniline	2377.33	1600	290	3333.33	ND	71.3	22 - 135			
4-Nitrophenol	2262.67	330	150	3333.33	ND	67.9	27 - 161			
Acenaphthene	1945.67	330	48	3333.33	ND	58.4	47 - 114			
Acenaphthylene	1939.67	330	51	3333.33	ND	58.2	45 - 117			
Anthracene	2137.00	330	49	3333.33	ND	64.1	47 - 130			
Benzidine (M)	ND	1600	1400	3333.33	ND	NR	8 - 179			M2
Benzo(a)anthracene	2144.67	330	39	3333.33	ND	64.3	46 - 130			
Benzo(a)pyrene	2134.00	330	45	3333.33	ND	64.0	46 - 131			
Benzo(b)fluoranthene	2054.33	330	55	3333.33	ND	61.6	44 - 130			
Benzo(g,h,i)perylene	2165.33	330	38	3333.33	ND	65.0	48 - 125			
Benzo(k)fluoranthene	2016.00	330	52	3333.33	ND	60.5	46 - 132			
Benzoic acid	1296.33	1600	890	3333.33	ND	38.9	0 - 121			
Benzyl alcohol	2568.33	660	67	3333.33	ND	77.0	32 - 156			
bis(2-chloroethoxy)methane	1852.00	330	59	3333.33	ND	55.6	42 - 100			
bis(2-Chloroethyl)ether	1684.67	330	57	3333.33	ND	50.5	39 - 104			
bis(2-chloroisopropyl)ether	1576.00	330	65	3333.33	ND	47.3	26 - 125			
bis(2-ethylhexyl)phthalate	1992.33	330	83	3333.33	ND	59.8	20 - 159			
Butylbenzylphthalate	2249.33	330	250	3333.33	ND	67.5	19 - 171			
Chrysene	2147.33	330	43	3333.33	ND	64.4	52 - 123			
Di-n-butylphthalate	2309.00	330	230	3333.33	ND	69.3	40 - 156			
Di-n-octylphthalate	2184.00	330	48	3333.33	ND	65.5	31 - 156			
Dibenz(a,h)anthracene	2169.67	330	43	3333.33	ND	65.1	31 - 149			
Dibenzofuran	2795.00	330	55	3333.33	ND	83.9	43 - 157			
Diethyl phthalate	2236.00	330	47	3333.33	ND	67.1	42 - 138			
Dimethyl phthalate	2045.00	330	46	3333.33	ND	61.4	44 - 127			
Fluoranthene	2143.00	330	47	3333.33	ND	64.3	46 - 131			
Fluorene	1995.00	330	49	3333.33	ND	59.9	48 - 120			
Hexachlorobenzene	2696.67	330	41	3333.33	ND	80.9	37 - 158			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
Matrix Spike (B7E0781-MS1) - Continued			**Source: 1702036-87**		Prepared: 5/23/2017 Analyzed: 5/31/2017					
Hexachlorobutadiene	2079.00	660	61	3333.33	ND	62.4	37 - 114			
Hexachlorocyclopentadiene	2892.00	660	64	3333.33	ND	86.8	29 - 146			
Hexachloroethane	2094.33	330	71	3333.33	ND	62.8	31 - 135			
Indeno(1,2,3-cd)pyrene	2234.67	330	44	3333.33	ND	67.0	36 - 148			
Isophorone	1869.67	330	57	3333.33	ND	56.1	36 - 112			
N-Nitroso-di-n propylamine	1923.67	330	65	3333.33	ND	57.7	37 - 120			
N-Nitrosodiphenylamine	2204.00	330	48	3333.33	ND	66.1	44 - 141			
Naphthalene	1823.33	330	60	3333.33	ND	54.7	47 - 106			
Nitrobenzene	2242.67	330	67	3333.33	ND	67.3	44 - 139			
Pentachlorophenol	2305.00	1600	190	3333.33	ND	69.2	32 - 128			
Phenanthrene	2104.00	330	46	3333.33	ND	63.1	49 - 129			
Phenol	1907.00	330	130	3333.33	ND	57.2	40 - 107			
Pyrene	2166.33	330	53	3333.33	ND	65.0	47 - 134			
Pyridine	1406.67	1600	270	3333.33	ND	42.2	24 - 99			
Surrogate: 1,2-Dichlorobenzene-d	*1581*			*3333.33*		*47.4*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2088*			*3333.33*		*62.6*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1645*			*3333.33*		*49.4*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*1861*			*3333.33*		*55.8*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1555*			*3333.33*		*46.7*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*1965*			*3333.33*		*59.0*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*1806*			*3333.33*		*54.2*	*38 - 104*			
Surrogate: Phenol-d5	*1678*			*3333.33*		*50.3*	*35 - 95*			
Matrix Spike Dup (B7E0781-MSD1)			**Source: 1702036-87**		Prepared: 5/23/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	2288.00	330	71	3333.33	ND	68.6	40 - 127	1.20	20	
1,2-Dichlorobenzene	1876.00	330	60	3333.33	ND	56.3	36 - 125	7.92	20	
1,3-Dichlorobenzene	1833.33	330	65	3333.33	ND	55.0	35 - 119	8.03	20	
1,4-Dichlorobenzene	1828.00	330	60	3333.33	ND	54.8	36 - 120	9.37	20	
2,4,5-Trichlorophenol	2679.00	330	61	3333.33	ND	80.4	42 - 135	6.01	20	
2,4,6-Trichlorophenol	2353.33	330	220	3333.33	ND	70.6	46 - 121	4.92	20	
2,4-Dichlorophenol	2114.67	1600	120	3333.33	ND	63.4	43 - 114	1.65	20	
2,4-Dimethylphenol	1745.33	330	120	3333.33	ND	52.4	37 - 105	1.83	20	
2,4-Dinitrophenol	2244.67	1600	86	3333.33	ND	67.3	17 - 177	2.83	20	
2,4-Dinitrotoluene	2974.00	330	46	3333.33	ND	89.2	50 - 166	4.84	20	
2,6-Dinitrotoluene	2761.67	330	49	3333.33	ND	82.9	43 - 169	1.81	20	
2-Chloronaphthalene	2493.67	330	59	3333.33	ND	74.8	44 - 144	2.18	20	
2-Chlorophenol	1588.67	330	120	3333.33	ND	47.7	38 - 99	6.32	20	
2-Methylnaphthalene	2809.00	330	67	3333.33	ND	84.3	41 - 151	3.59	20	
2-Methylphenol	1833.00	330	67	3333.33	ND	55.0	37 - 108	4.22	20	
2-Nitroaniline	2766.33	1600	200	3333.33	ND	83.0	13 - 155	4.96	20	
2-Nitrophenol	2093.00	330	110	3333.33	ND	62.8	24 - 142	2.91	20	

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
Matrix Spike Dup (B7E0781-MSD1) - Continued			**Source: 1702036-87**		Prepared: 5/23/2017 Analyzed: 5/31/2017					
3,3´-Dichlorobenzidine	2610.00	660	280	3333.33	ND	78.3	31 - 153	2.50	20	
3-Nitroaniline	2548.67	1600	44	3333.33	ND	76.5	7 - 147	5.32	20	
4,6-Dinitro-2-methyphenol	2425.33	1600	300	3333.33	ND	72.8	45 - 155	2.43	20	
4-Bromophenyl-phenylether	2428.67	330	50	3333.33	ND	72.9	45 - 122	4.71	20	
4-Chloro-3-methylphenol	2248.67	660	110	3333.33	ND	67.5	45 - 124	3.85	20	
4-Chloroaniline	2331.33	660	53	3333.33	ND	69.9	12 - 117	4.92	20	
4-Chlorophenyl-phenylether	2299.67	330	48	3333.33	ND	69.0	45 - 115	3.06	20	
4-Methylphenol	2141.67	330	66	3333.33	ND	64.3	39 - 125	1.80	20	
4-Nitroaniline	2433.67	1600	290	3333.33	ND	73.0	22 - 135	2.34	20	
4-Nitrophenol	2388.00	330	150	3333.33	ND	71.6	27 - 161	5.39	20	
Acenaphthene	2002.33	330	48	3333.33	ND	60.1	47 - 114	2.87	20	
Acenaphthylene	1983.67	330	51	3333.33	ND	59.5	45 - 117	2.24	20	
Anthracene	2224.00	330	49	3333.33	ND	66.7	47 - 130	3.99	20	
Benzidine (M)	ND	1600	1400	3333.33	ND	NR	8 - 179	NR	20	M2
Benzo(a)anthracene	2166.33	330	39	3333.33	ND	65.0	46 - 130	1.01	20	
Benzo(a)pyrene	2248.67	330	45	3333.33	ND	67.5	46 - 131	5.23	20	
Benzo(b)fluoranthene	2112.67	330	55	3333.33	ND	63.4	44 - 130	2.80	20	
Benzo(g,h,i)perylene	2217.00	330	38	3333.33	ND	66.5	48 - 125	2.36	20	
Benzo(k)fluoranthene	2122.00	330	52	3333.33	ND	63.7	46 - 132	5.12	20	
Benzoic acid	1100.33	1600	890	3333.33	ND	33.0	0 - 121	16.4	20	
Benzyl alcohol	2582.00	660	67	3333.33	ND	77.5	32 - 156	0.531	20	
bis(2-chloroethoxy)methane	1900.00	330	59	3333.33	ND	57.0	42 - 100	2.56	20	
bis(2-Chloroethyl)ether	1642.00	330	57	3333.33	ND	49.3	39 - 104	2.57	20	
bis(2-chloroisopropyl)ether	1498.67	330	65	3333.33	ND	45.0	26 - 125	5.03	20	
bis(2-ethylhexyl)phthalate	2093.33	330	83	3333.33	ND	62.8	20 - 159	4.94	20	
Butylbenzylphthalate	2345.00	330	250	3333.33	ND	70.4	19 - 171	4.16	20	
Chrysene	2186.00	330	43	3333.33	ND	65.6	52 - 123	1.78	20	
Di-n-butylphthalate	2448.33	330	230	3333.33	ND	73.4	40 - 156	5.86	20	
Di-n-octylphthalate	2365.33	330	48	3333.33	ND	71.0	31 - 156	7.97	20	
Dibenz(a,h)anthracene	2251.00	330	43	3333.33	ND	67.5	31 - 149	3.68	20	
Dibenzofuran	2925.33	330	55	3333.33	ND	87.8	43 - 157	4.56	20	
Diethyl phthalate	2328.00	330	47	3333.33	ND	69.8	42 - 138	4.03	20	
Dimethyl phthalate	2116.67	330	46	3333.33	ND	63.5	44 - 127	3.44	20	
Fluoranthene	2272.33	330	47	3333.33	ND	68.2	46 - 131	5.86	20	
Fluorene	2062.33	330	49	3333.33	ND	61.9	48 - 120	3.32	20	
Hexachlorobenzene	2806.33	330	41	3333.33	ND	84.2	37 - 158	3.99	20	
Hexachlorobutadiene	2074.33	660	61	3333.33	ND	62.2	37 - 114	0.225	20	
Hexachlorocyclopentadiene	2832.67	660	64	3333.33	ND	85.0	29 - 146	2.07	20	
Hexachloroethane	1956.67	330	71	3333.33	ND	58.7	31 - 135	6.80	20	
Indeno(1,2,3-cd)pyrene	2298.33	330	44	3333.33	ND	69.0	36 - 148	2.81	20	
Isophorone	1957.00	330	57	3333.33	ND	58.7	36 - 112	4.56	20	
N-Nitroso-di-n propylamine	1964.00	330	65	3333.33	ND	58.9	37 - 120	2.07	20	

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0781 - MSSEMI_S (continued)										
Matrix Spike Dup (B7E0781-MSD1) - Continued			**Source: 1702036-87**		Prepared: 5/23/2017 Analyzed: 5/31/2017					
N-Nitrosodiphenylamine	2288.00	330	48	3333.33	ND	68.6	44 - 141	3.74	20	
Naphthalene	1831.67	330	60	3333.33	ND	55.0	47 - 106	0.456	20	
Nitrobenzene	2294.33	330	67	3333.33	ND	68.8	44 - 139	2.28	20	
Pentachlorophenol	2317.00	1600	190	3333.33	ND	69.5	32 - 128	0.519	20	
Phenanthrene	2138.33	330	46	3333.33	ND	64.2	49 - 129	1.62	20	
Phenol	1712.33	330	130	3333.33	ND	51.4	40 - 107	10.8	20	
Pyrene	2279.00	330	53	3333.33	ND	68.4	47 - 134	5.07	20	
Pyridine	1299.67	1600	270	3333.33	ND	39.0	24 - 99	7.91	20	
Surrogate: 1,2-Dichlorobenzene-d	*1469*			*3333.33*		*44.1*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2156*			*3333.33*		*64.7*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1527*			*3333.33*		*45.8*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*1920*			*3333.33*		*57.6*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1419*			*3333.33*		*42.6*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2086*			*3333.33*		*62.6*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*1841*			*3333.33*		*55.2*	*38 - 104*			
Surrogate: Phenol-d5	*1558*			*3333.33*		*46.7*	*35 - 95*			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S										
Blank (B7E0814-BLK1)					Prepared: 5/24/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	ND	330	71							
1,2-Dichlorobenzene	ND	330	60							
1,3-Dichlorobenzene	ND	330	65							
1,4-Dichlorobenzene	ND	330	60							
2,4,5-Trichlorophenol	ND	330	61							
2,4,6-Trichlorophenol	ND	330	220							
2,4-Dichlorophenol	ND	1600	120							
2,4-Dimethylphenol	ND	330	120							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	46							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	59							
2-Chlorophenol	ND	330	120							
2-Methylnaphthalene	ND	330	67							
2-Methylphenol	ND	330	67							
2-Nitroaniline	ND	1600	200							
2-Nitrophenol	ND	330	110							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	44							
4,6-Dinitro-2-methyphenol	ND	1600	300							
4-Bromophenyl-phenylether	ND	330	50							
4-Chloro-3-methylphenol	ND	660	110							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	48							
4-Methylphenol	ND	330	66							
4-Nitroaniline	ND	1600	290							
4-Nitrophenol	ND	330	150							
Acenaphthene	ND	330	48							
Acenaphthylene	ND	330	51							
Anthracene	ND	330	49							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	39							
Benzo(a)pyrene	ND	330	45							
Benzo(b)fluoranthene	ND	330	55							
Benzo(g,h,i)perylene	ND	330	38							
Benzo(k)fluoranthene	ND	330	52							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	67							
bis(2-chloroethoxy)methane	ND	330	59							
bis(2-Chloroethyl)ether	ND	330	57							
bis(2-chloroisopropyl)ether	ND	330	65							

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
Blank (B7E0814-BLK1) - Continued					Prepared: 5/24/2017 Analyzed: 5/31/2017					
bis(2-ethylhexyl)phthalate	ND	330	83							
Butylbenzylphthalate	ND	330	250							
Chrysene	ND	330	43							
Di-n-butylphthalate	ND	330	230							
Di-n-octylphthalate	ND	330	48							
Dibenz(a,h)anthracene	ND	330	43							
Dibenzofuran	ND	330	55							
Diethyl phthalate	ND	330	47							
Dimethyl phthalate	ND	330	46							
Fluoranthene	ND	330	47							
Fluorene	ND	330	49							
Hexachlorobenzene	ND	330	41							
Hexachlorobutadiene	ND	660	61							
Hexachlorocyclopentadiene	ND	660	64							
Hexachloroethane	ND	330	71							
Indeno(1,2,3-cd)pyrene	ND	330	44							
Isophorone	ND	330	57							
N-Nitroso-di-n propylamine	ND	330	65							
N-Nitrosodiphenylamine	ND	330	48							
Naphthalene	ND	330	60							
Nitrobenzene	ND	330	67							
Pentachlorophenol	ND	1600	190							
Phenanthrene	ND	330	46							
Phenol	ND	330	130							
Pyrene	ND	330	53							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d	*1729*			*3333.33*		*51.9*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2460*			*3333.33*		*73.8*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1754*			*3333.33*		*52.6*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2039*			*3333.33*		*61.2*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1709*			*3333.33*		*51.3*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*3043*			*3333.33*		*91.3*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*1887*			*3333.33*		*56.6*	*38 - 104*			
Surrogate: Phenol-d5	*1829*			*3333.33*		*54.9*	*35 - 95*			
LCS (B7E0814-BS1)					Prepared: 5/24/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	2375.33	330	71	3333.33		71.3	52 - 122			
1,2-Dichlorobenzene	2136.00	330	60	3333.33		64.1	46 - 118			
1,3-Dichlorobenzene	2149.33	330	65	3333.33		64.5	45 - 113			
1,4-Dichlorobenzene	2128.33	330	60	3333.33		63.8	46 - 113			
2,4,5-Trichlorophenol	2904.00	330	61	3333.33		87.1	65 - 126			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
LCS (B7E0814-BS1) - Continued					Prepared: 5/24/2017 Analyzed: 5/31/2017					
2,4,6-Trichlorophenol	2843.33	330	220	3333.33		85.3	61 - 119			
2,4-Dichlorophenol	2249.33	1600	120	3333.33		67.5	55 - 110			
2,4-Dimethylphenol	2011.00	330	120	3333.33		60.3	47 - 100			
2,4-Dinitrophenol	2766.00	1600	86	3333.33		83.0	37 - 186			
2,4-Dinitrotoluene	3635.33	330	46	3333.33		109	74 - 155			
2,6-Dinitrotoluene	3495.00	330	49	3333.33		105	62 - 169			
2-Chloronaphthalene	2917.33	330	59	3333.33		87.5	58 - 140			
2-Chlorophenol	1816.67	330	120	3333.33		54.5	45 - 96			
2-Methylnaphthalene	2761.67	330	67	3333.33		82.9	54 - 147			
2-Methylphenol	1920.67	330	67	3333.33		57.6	49 - 103			
2-Nitroaniline	3081.67	1600	200	3333.33		92.5	23 - 155			
2-Nitrophenol	2158.33	330	110	3333.33		64.8	54 - 112			
3,3´-Dichlorobenzidine	3100.33	660	280	3333.33		93.0	62 - 141			
3-Nitroaniline	2882.00	1600	44	3333.33		86.5	30 - 137			
4,6-Dinitro-2-methyphenol	3078.33	1600	300	3333.33		92.4	75 - 145			
4-Bromophenyl-phenylether	2978.33	330	50	3333.33		89.4	68 - 118			
4-Chloro-3-methylphenol	2719.33	660	110	3333.33		81.6	63 - 119			
4-Chloroaniline	2385.67	660	53	3333.33		71.6	19 - 127			
4-Chlorophenyl-phenylether	2769.33	330	48	3333.33		83.1	64 - 113			
4-Methylphenol	2240.33	330	66	3333.33		67.2	54 - 120			
4-Nitroaniline	2797.67	1600	290	3333.33		83.9	35 - 136			
4-Nitrophenol	2962.00	330	150	3333.33		88.9	52 - 160			
Acenaphthene	2480.67	330	48	3333.33		74.4	62 - 113			
Acenaphthylene	2491.33	330	51	3333.33		74.7	62 - 114			
Anthracene	2795.00	330	49	3333.33		83.9	71 - 129			
Benzidine (M)	1892.00	1600	1400	3333.33		56.8	45 - 184			
Benzo(a)anthracene	2783.00	330	39	3333.33		83.5	66 - 133			
Benzo(a)pyrene	2812.00	330	45	3333.33		84.4	71 - 133			
Benzo(b)fluoranthene	2716.00	330	55	3333.33		81.5	72 - 128			
Benzo(g,h,i)perylene	2738.33	330	38	3333.33		82.2	70 - 126			
Benzo(k)fluoranthene	2528.33	330	52	3333.33		75.8	70 - 136			
Benzoic acid	1625.33	1600	890	3333.33		48.8	11 - 108			
Benzyl alcohol	2649.00	660	67	3333.33		79.5	57 - 143			
bis(2-chloroethoxy)methane	2067.00	330	59	3333.33		62.0	51 - 99			
bis(2-Chloroethyl)ether	1810.67	330	57	3333.33		54.3	46 - 101			
bis(2-chloroisopropyl)ether	1821.67	330	65	3333.33		54.7	28 - 126			
bis(2-ethylhexyl)phthalate	2671.67	330	83	3333.33		80.2	49 - 134			
Butylbenzylphthalate	3067.67	330	250	3333.33		92.0	54 - 137			
Chrysene	2778.67	330	43	3333.33		83.4	70 - 125			
Di-n-butylphthalate	2851.00	330	230	3333.33		85.5	59 - 152			
Di-n-octylphthalate	2919.33	330	48	3333.33		87.6	50 - 146			
Dibenz(a,h)anthracene	2767.33	330	43	3333.33		83.0	59 - 141			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
LCS (B7E0814-BS1) - Continued					Prepared: 5/24/2017 Analyzed: 5/31/2017					
Dibenzofuran	3264.00	330	55	3333.33		97.9	58 - 158			
Diethyl phthalate	2782.67	330	47	3333.33		83.5	68 - 136			
Dimethyl phthalate	2569.00	330	46	3333.33		77.1	69 - 124			
Fluoranthene	2757.67	330	47	3333.33		82.7	72 - 128			
Fluorene	2559.67	330	49	3333.33		76.8	67 - 118			
Hexachlorobenzene	3472.00	330	41	3333.33		104	61 - 155			
Hexachlorobutadiene	2082.00	660	61	3333.33		62.5	44 - 111			
Hexachlorocyclopentadiene	3114.33	660	64	3333.33		93.4	46 - 138			
Hexachloroethane	2204.33	330	71	3333.33		66.1	40 - 129			
Indeno(1,2,3-cd)pyrene	2828.00	330	44	3333.33		84.8	63 - 142			
Isophorone	2169.33	330	57	3333.33		65.1	55 - 106			
N-Nitroso-di-n propylamine	2199.33	330	65	3333.33		66.0	50 - 117			
N-Nitrosodiphenylamine	2902.67	330	48	3333.33		87.1	70 - 137			
Naphthalene	1959.00	330	60	3333.33		58.8	54 - 106			
Nitrobenzene	2454.67	330	67	3333.33		73.6	57 - 134			
Pentachlorophenol	2888.00	1600	190	3333.33		86.6	53 - 115			
Phenanthrene	2696.00	330	46	3333.33		80.9	70 - 129			
Phenol	1979.67	330	130	3333.33		59.4	47 - 105			
Pyrene	2747.67	330	53	3333.33		82.4	73 - 131			
Pyridine	1564.33	1600	270	3333.33		46.9	40 - 91			
Surrogate: 1,2-Dichlorobenzene-d	*1721*			*3333.33*		*51.6*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2712*			*3333.33*		*81.4*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1807*			*3333.33*		*54.2*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2241*			*3333.33*		*67.2*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1676*			*3333.33*		*50.3*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2730*			*3333.33*		*81.9*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*1970*			*3333.33*		*59.1*	*38 - 104*			
Surrogate: Phenol-d5	*1860*			*3333.33*		*55.8*	*35 - 95*			
Matrix Spike (B7E0814-MS1)			**Source: 1702036-AB**		Prepared: 5/24/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	2525.33	330	71	3333.33	ND	75.8	40 - 127			
1,2-Dichlorobenzene	2323.67	330	60	3333.33	ND	69.7	36 - 125			
1,3-Dichlorobenzene	2321.67	330	65	3333.33	ND	69.7	35 - 119			
1,4-Dichlorobenzene	2281.00	330	60	3333.33	ND	68.4	36 - 120			
2,4,5-Trichlorophenol	2649.00	330	61	3333.33	ND	79.5	42 - 135			
2,4,6-Trichlorophenol	2562.00	330	220	3333.33	ND	76.9	46 - 121			
2,4-Dichlorophenol	2344.67	1600	120	3333.33	ND	70.3	43 - 114			
2,4-Dimethylphenol	2093.67	330	120	3333.33	ND	62.8	37 - 105			
2,4-Dinitrophenol	2345.00	1600	86	3333.33	ND	70.4	17 - 177			
2,4-Dinitrotoluene	3045.00	330	46	3333.33	ND	91.4	50 - 166			
2,6-Dinitrotoluene	3068.33	330	49	3333.33	ND	92.0	43 - 169			

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Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
Matrix Spike (B7E0814-MS1) - Continued			**Source: 1702036-AB**		Prepared: 5/24/2017 Analyzed: 5/31/2017					
2-Chloronaphthalene	2773.33	330	59	3333.33	ND	83.2	44 - 144			
2-Chlorophenol	1959.67	330	120	3333.33	ND	58.8	38 - 99			
2-Methylnaphthalene	2781.00	330	67	3333.33	ND	83.4	41 - 151			
2-Methylphenol	1983.00	330	67	3333.33	ND	59.5	37 - 108			
2-Nitroaniline	2745.67	1600	200	3333.33	ND	82.4	13 - 155			
2-Nitrophenol	2373.00	330	110	3333.33	ND	71.2	24 - 142			
3,3´-Dichlorobenzidine	2502.33	660	280	3333.33	ND	75.1	31 - 153			
3-Nitroaniline	2518.33	1600	44	3333.33	ND	75.6	7 - 147			
4,6-Dinitro-2-methyphenol	2749.33	1600	300	3333.33	ND	82.5	45 - 155			
4-Bromophenyl-phenylether	2632.67	330	50	3333.33	ND	79.0	45 - 122			
4-Chloro-3-methylphenol	2442.33	660	110	3333.33	ND	73.3	45 - 124			
4-Chloroaniline	2304.00	660	53	3333.33	ND	69.1	12 - 117			
4-Chlorophenyl-phenylether	2423.00	330	48	3333.33	ND	72.7	45 - 115			
4-Methylphenol	2255.00	330	66	3333.33	ND	67.7	39 - 125			
4-Nitroaniline	2231.00	1600	290	3333.33	ND	66.9	22 - 135			
4-Nitrophenol	2479.33	330	150	3333.33	ND	74.4	27 - 161			
Acenaphthene	2227.67	330	48	3333.33	ND	66.8	47 - 114			
Acenaphthylene	2251.00	330	51	3333.33	ND	67.5	45 - 117			
Anthracene	2432.67	330	49	3333.33	ND	73.0	47 - 130			
Benzidine (M)	ND	1600	1400	3333.33	ND	NR	8 - 179			M2
Benzo(a)anthracene	2332.00	330	39	3333.33	ND	70.0	46 - 130			
Benzo(a)pyrene	2525.67	330	45	3333.33	ND	75.8	46 - 131			
Benzo(b)fluoranthene	2440.00	330	55	3333.33	ND	73.2	44 - 130			
Benzo(g,h,i)perylene	2470.00	330	38	3333.33	ND	74.1	48 - 125			
Benzo(k)fluoranthene	2247.00	330	52	3333.33	ND	67.4	46 - 132			
Benzoic acid	1201.33	1600	890	3333.33	ND	36.0	0 - 121			
Benzyl alcohol	2727.67	660	67	3333.33	ND	81.8	32 - 156			
bis(2-chloroethoxy)methane	2131.67	330	59	3333.33	ND	64.0	42 - 100			
bis(2-Chloroethyl)ether	1977.00	330	57	3333.33	ND	59.3	39 - 104			
bis(2-chloroisopropyl)ether	1941.67	330	65	3333.33	ND	58.3	26 - 125			
bis(2-ethylhexyl)phthalate	2349.00	330	83	3333.33	ND	70.5	20 - 159			
Butylbenzylphthalate	2656.33	330	250	3333.33	ND	79.7	19 - 171			
Chrysene	2427.67	330	43	3333.33	ND	72.8	52 - 123			
Di-n-butylphthalate	2628.33	330	230	3333.33	ND	78.8	40 - 156			
Di-n-octylphthalate	2749.00	330	48	3333.33	ND	82.5	31 - 156			
Dibenz(a,h)anthracene	2480.33	330	43	3333.33	ND	74.4	31 - 149			
Dibenzofuran	2889.00	330	55	3333.33	ND	86.7	43 - 157			
Diethyl phthalate	2455.00	330	47	3333.33	ND	73.7	42 - 138			
Dimethyl phthalate	2242.67	330	46	3333.33	ND	67.3	44 - 127			
Fluoranthene	2306.67	330	47	3333.33	ND	69.2	46 - 131			
Fluorene	2235.67	330	49	3333.33	ND	67.1	48 - 120			
Hexachlorobenzene	2929.33	330	41	3333.33	ND	87.9	37 - 158			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
Matrix Spike (B7E0814-MS1) - Continued			**Source: 1702036-AB**		Prepared: 5/24/2017 Analyzed: 5/31/2017					
Hexachlorobutadiene	2374.33	660	61	3333.33	ND	71.2	37 - 114			
Hexachlorocyclopentadiene	3418.67	660	64	3333.33	ND	103	29 - 146			
Hexachloroethane	2462.67	330	71	3333.33	ND	73.9	31 - 135			
Indeno(1,2,3-cd)pyrene	2564.00	330	44	3333.33	ND	76.9	36 - 148			
Isophorone	2102.67	330	57	3333.33	ND	63.1	36 - 112			
N-Nitroso-di-n propylamine	2235.00	330	65	3333.33	ND	67.1	37 - 120			
N-Nitrosodiphenylamine	2565.67	330	48	3333.33	ND	77.0	44 - 141			
Naphthalene	2092.33	330	60	3333.33	ND	62.8	47 - 106			
Nitrobenzene	2600.67	330	67	3333.33	ND	78.0	44 - 139			
Pentachlorophenol	2515.67	1600	190	3333.33	ND	75.5	32 - 128			
Phenanthrene	2345.67	330	46	3333.33	ND	70.4	49 - 129			
Phenol	2255.67	330	130	3333.33	ND	67.7	40 - 107			
Pyrene	2304.33	330	53	3333.33	ND	69.1	47 - 134			
Pyridine	1610.33	1600	270	3333.33	ND	48.3	24 - 99			
Surrogate: 1,2-Dichlorobenzene-d	*1762*			*3333.33*		*52.9*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2212*			*3333.33*		*66.4*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*1893*			*3333.33*		*56.8*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2158*			*3333.33*		*64.7*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1752*			*3333.33*		*52.6*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2375*			*3333.33*		*71.3*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2084*			*3333.33*		*62.5*	*38 - 104*			
Surrogate: Phenol-d5	*1924*			*3333.33*		*57.7*	*35 - 95*			
Matrix Spike Dup (B7E0814-MSD1)			**Source: 1702036-AB**		Prepared: 5/24/2017 Analyzed: 5/31/2017					
1,2,4-Trichlorobenzene	2821.33	330	71	3333.33	ND	84.6	40 - 127	11.1	20	
1,2-Dichlorobenzene	2565.00	330	60	3333.33	ND	77.0	36 - 125	9.87	20	
1,3-Dichlorobenzene	2543.33	330	65	3333.33	ND	76.3	35 - 119	9.11	20	
1,4-Dichlorobenzene	2502.00	330	60	3333.33	ND	75.1	36 - 120	9.24	20	
2,4,5-Trichlorophenol	2833.00	330	61	3333.33	ND	85.0	42 - 135	6.71	20	
2,4,6-Trichlorophenol	2800.33	330	220	3333.33	ND	84.0	46 - 121	8.89	20	
2,4-Dichlorophenol	2594.33	1600	120	3333.33	ND	77.8	43 - 114	10.1	20	
2,4-Dimethylphenol	2369.67	330	120	3333.33	ND	71.1	37 - 105	12.4	20	
2,4-Dinitrophenol	2618.67	1600	86	3333.33	ND	78.6	17 - 177	11.0	20	
2,4-Dinitrotoluene	3312.33	330	46	3333.33	ND	99.4	50 - 166	8.41	20	
2,6-Dinitrotoluene	3183.33	330	49	3333.33	ND	95.5	43 - 169	3.68	20	
2-Chloronaphthalene	2967.00	330	59	3333.33	ND	89.0	44 - 144	6.75	20	
2-Chlorophenol	2160.67	330	120	3333.33	ND	64.8	38 - 99	9.76	20	
2-Methylnaphthalene	3062.33	330	67	3333.33	ND	91.9	41 - 151	9.63	20	
2-Methylphenol	2201.00	330	67	3333.33	ND	66.0	37 - 108	10.4	20	
2-Nitroaniline	2928.33	1600	200	3333.33	ND	87.8	13 - 155	6.44	20	
2-Nitrophenol	2643.33	330	110	3333.33	ND	79.3	24 - 142	10.8	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
Matrix Spike Dup (B7E0814-MSD1) - Continued			**Source: 1702036-AB**		Prepared: 5/24/2017 Analyzed: 5/31/2017					
3,3´-Dichlorobenzidine	2869.67	660	280	3333.33	ND	86.1	31 - 153	13.7	20	
3-Nitroaniline	2647.67	1600	44	3333.33	ND	79.4	7 - 147	5.01	20	
4,6-Dinitro-2-methyphenol	2969.67	1600	300	3333.33	ND	89.1	45 - 155	7.71	20	
4-Bromophenyl-phenylether	2840.33	330	50	3333.33	ND	85.2	45 - 122	7.59	20	
4-Chloro-3-methylphenol	2725.00	660	110	3333.33	ND	81.8	45 - 124	10.9	20	
4-Chloroaniline	2630.67	660	53	3333.33	ND	78.9	12 - 117	13.2	20	
4-Chlorophenyl-phenylether	2658.33	330	48	3333.33	ND	79.8	45 - 115	9.26	20	
4-Methylphenol	2497.33	330	66	3333.33	ND	74.9	39 - 125	10.2	20	
4-Nitroaniline	2443.33	1600	290	3333.33	ND	73.3	22 - 135	9.09	20	
4-Nitrophenol	2671.00	330	150	3333.33	ND	80.1	27 - 161	7.44	20	
Acenaphthene	2374.67	330	48	3333.33	ND	71.2	47 - 114	6.39	20	
Acenaphthylene	2451.33	330	51	3333.33	ND	73.5	45 - 117	8.52	20	
Anthracene	2659.67	330	49	3333.33	ND	79.8	47 - 130	8.92	20	
Benzidine (M)	ND	1600	1400	3333.33	ND	NR	8 - 179	NR	20	M2
Benzo(a)anthracene	2567.33	330	39	3333.33	ND	77.0	46 - 130	9.61	20	
Benzo(a)pyrene	2691.33	330	45	3333.33	ND	80.7	46 - 131	6.35	20	
Benzo(b)fluoranthene	2551.67	330	55	3333.33	ND	76.6	44 - 130	4.47	20	
Benzo(g,h,i)perylene	2689.67	330	38	3333.33	ND	80.7	48 - 125	8.51	20	
Benzo(k)fluoranthene	2442.67	330	52	3333.33	ND	73.3	46 - 132	8.34	20	
Benzoic acid	1299.67	1600	890	3333.33	ND	39.0	0 - 121	7.86	20	
Benzyl alcohol	2953.33	660	67	3333.33	ND	88.6	32 - 156	7.94	20	
bis(2-chloroethoxy)methane	2371.67	330	59	3333.33	ND	71.2	42 - 100	10.7	20	
bis(2-Chloroethyl)ether	2113.33	330	57	3333.33	ND	63.4	39 - 104	6.67	20	
bis(2-chloroisopropyl)ether	2052.33	330	65	3333.33	ND	61.6	26 - 125	5.54	20	
bis(2-ethylhexyl)phthalate	2527.67	330	83	3333.33	ND	75.8	20 - 159	7.33	20	
Butylbenzylphthalate	2875.33	330	250	3333.33	ND	86.3	19 - 171	7.92	20	
Chrysene	2621.33	330	43	3333.33	ND	78.6	52 - 123	7.67	20	
Di-n-butylphthalate	2824.00	330	230	3333.33	ND	84.7	40 - 156	7.18	20	
Di-n-octylphthalate	2859.67	330	48	3333.33	ND	85.8	31 - 156	3.95	20	
Dibenz(a,h)anthracene	2700.67	330	43	3333.33	ND	81.0	31 - 149	8.51	20	
Dibenzofuran	3128.67	330	55	3333.33	ND	93.9	43 - 157	7.97	20	
Diethyl phthalate	2598.00	330	47	3333.33	ND	77.9	42 - 138	5.66	20	
Dimethyl phthalate	2388.33	330	46	3333.33	ND	71.6	44 - 127	6.29	20	
Fluoranthene	2614.33	330	47	3333.33	ND	78.4	46 - 131	12.5	20	
Fluorene	2402.67	330	49	3333.33	ND	72.1	48 - 120	7.20	20	
Hexachlorobenzene	3225.33	330	41	3333.33	ND	96.8	37 - 158	9.62	20	
Hexachlorobutadiene	2618.33	660	61	3333.33	ND	78.6	37 - 114	9.77	20	
Hexachlorocyclopentadiene	3564.67	660	64	3333.33	ND	107	29 - 146	4.18	20	
Hexachloroethane	2630.00	330	71	3333.33	ND	78.9	31 - 135	6.57	20	
Indeno(1,2,3-cd)pyrene	2737.67	330	44	3333.33	ND	82.1	36 - 148	6.55	20	
Isophorone	2342.33	330	57	3333.33	ND	70.3	36 - 112	10.8	20	
N-Nitroso-di-n propylamine	2396.00	330	65	3333.33	ND	71.9	37 - 120	6.95	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0814 - MSSEMI_S (continued)										
Matrix Spike Dup (B7E0814-MSD1) - Continued			**Source: 1702036-AB**		Prepared: 5/24/2017 Analyzed: 5/31/2017					
N-Nitrosodiphenylamine	2781.67	330	48	3333.33	ND	83.5	44 - 141	8.08	20	
Naphthalene	2342.67	330	60	3333.33	ND	70.3	47 - 106	11.3	20	
Nitrobenzene	2844.67	330	67	3333.33	ND	85.3	44 - 139	8.96	20	
Pentachlorophenol	2790.00	1600	190	3333.33	ND	83.7	32 - 128	10.3	20	
Phenanthrene	2596.00	330	46	3333.33	ND	77.9	49 - 129	10.1	20	
Phenol	2351.67	330	130	3333.33	ND	70.6	40 - 107	4.17	20	
Pyrene	2568.33	330	53	3333.33	ND	77.0	47 - 134	10.8	20	
Pyridine	1689.00	1600	270	3333.33	ND	50.7	24 - 99	4.77	20	
Surrogate: 1,2-Dichlorobenzene-d	*1936*			*3333.33*		*58.1*	*38 - 93*			
Surrogate: 2,4,6-Tribromophenol	*2387*			*3333.33*		*71.6*	*27 - 124*			
Surrogate: 2-Chlorophenol-d4	*2061*			*3333.33*		*61.8*	*36 - 96*			
Surrogate: 2-Fluorobiphenyl	*2288*			*3333.33*		*68.6*	*44 - 100*			
Surrogate: 2-Fluorophenol	*1919*			*3333.33*		*57.6*	*32 - 89*			
Surrogate: 4-Terphenyl-d14	*2473*			*3333.33*		*74.2*	*49 - 123*			
Surrogate: Nitrobenzene-d5	*2256*			*3333.33*		*67.7*	*38 - 104*			
Surrogate: Phenol-d5	*2072*			*3333.33*		*62.2*	*35 - 95*			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Notes and Definitions

S5	Surrogate recovery was above laboratory acceptance limit. Sample reanalysis showed the same high recovery.
S4	Surrogate was diluted out.
S12	Surrogate recovery outside in-house established limit but within method default criteria.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
L5	Laboratory Control Sample high biased. Sample result/s was non-detect (ND) for the target analyte; therefore reanalysis was not necessary.
L3	Laboratory control sample outside in-house established limits but within method criteria.
D6	Sample required dilution due to high concentration of target analyte.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

American Environmental Testing Laboratory Inc.
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Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Telephone: (562)989-4045
Attention: Rachelle Arada

Number of Pages 10
Date Received 05/18/2017
Date Reported 05/25/2017

Job Number	Order Date	Client
87764	05/18/2017	ATL

Project ID: 1702036
Project Name: PO# SC11608

Enclosed please find results of analyses of 15 soil samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Director

American Environmental Testing Laboratory Inc.
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Project ID: 1702036
Date Received 05/18/2017
Date Reported 05/25/2017

Job Number	Order Date	Client
87764	05/18/2017	ATL

CERTIFICATE OF ANALYSIS
CASE NARRATIVE

AETL received 15 samples with the following specification on 05/18/2017.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
87764.01	1702036-22	05/15/2017	Soil	1
87764.02	1702036-26	05/15/2017	Soil	1
87764.03	1702036-38	05/15/2017	Soil	1
87764.04	1702036-42	05/15/2017	Soil	1
87764.05	1702036-46	05/15/2017	Soil	1
87764.06	1702036-51	05/15/2017	Soil	1
87764.07	1702036-69	05/15/2017	Soil	1
87764.08	1702036-74	05/15/2017	Soil	1
87764.09	1702036-77	05/15/2017	Soil	1
87764.10	1702036-85	05/16/2017	Soil	1
87764.11	1702036-90	05/16/2017	Soil	1
87764.12	1702036-92	05/16/2017	Soil	1
87764.13	1702036-95	05/16/2017	Soil	1
87764.14	1702036-AA	05/16/2017	Soil	1
87764.15	1702036-AM	05/16/2017	Soil	1

Method ^ Submethod	Req Date	Priority	TAT	Units
(8151A)	05/25/2017	2	Normal	ug/Kg

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

Checked By: _____ Approved By: C. Razmara

Cyrus Razmara, Ph.D.
Laboratory Dire

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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Telephone: (562)989-4045
Attn: Rachelle Arada
Page: **2**

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817

Our Lab I.D.			Method Blank	**87764.01**	**87764.02**		
Client Sample I.D.				1702036-22	1702036-26		
Date Sampled				05/15/2017	05/15/2017		
Date Prepared			05/18/2007	05/18/2007	05/18/2007		
Preparation Method			3550B	3550B	3550B		
Date Analyzed			05/19/2017	05/19/2017	05/19/2017		
Matrix			Soil	Soil	Soil		
Units			ug/Kg	ug/Kg	ug/Kg		
Dilution Factor			1	1	1		
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**		
Acifluorfen	20	20	ND	ND	ND		
Bentazon	10	10	ND	ND	ND		
Chloramben	10	10	ND	ND	ND		
2,4-D	10	10	ND	ND	ND		
Dalapon	20	20	ND	ND	ND		
2,4-DB	10	10	ND	ND	ND		
DCPA diacid	20	20	ND	ND	ND		
Dicamba	10	10	ND	ND	ND		
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND		
Dichloroprop	10	10	ND	ND	ND		
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND	ND	ND		
MCPA	2000	2000	ND	ND	ND		
MCPP	2000	2000	ND	ND	ND		
4-Nitrophenol	10	10	ND	ND	ND		
Pentachlorophenol (PCP)	10	10	ND	ND	ND		
Picloram	10	10	ND	ND	ND		
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND		
2,4,5-TP	10	10	ND	ND	ND		
Our Lab I.D.			Method Blank	**87764.01**	**87764.02**		
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**		
DCAA	40-150		52.3	40.5	42.6		

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ANALYTICAL RESULTS

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Telephone: (562)989-4045
Attn: Rachelle Arada
Page: 3

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817

Our Lab I.D.			87764.03				
Client Sample I.D.			1702036-38				
Date Sampled			05/15/2017				
Date Prepared			05/18/2007				
Preparation Method			3550B				
Date Analyzed			05/19/2017				
Matrix			Soil				
Units			ug/Kg				
Dilution Factor			2				
Analytes	**MDL**	**PQL**	**Results**				
Acifluorfen	40	40	ND				
Bentazon	20	20	ND				
Chloramben	20	20	ND				
2,4-D	20	20	ND				
Dalapon	40	40	ND				
2,4-DB	20	20	ND				
DCPA diacid	40	40	ND				
Dicamba	20	20	ND				
3,5-Dichlorobenzoic acid	20	20	ND				
Dichloroprop	20	20	ND				
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	40	40	ND				
MCPA	4000	4000	ND				
MCPP	4000	4000	ND				
4-Nitrophenol	20	20	ND				
Pentachlorophenol (PCP)	20	20	ND				
Picloram	20	20	ND				
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	20	20	ND				
2,4,5-TP	20	20	ND				

Comment(s):
87764.03: Analyzed under dilution due to matrix interference

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ANALYTICAL RESULTS

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

Our Lab I.D.			**87764.03**				
Surrogates	**%Rec.Limit**		**% Rec.**				
DCAA	40-150		45.1				

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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Telephone: (562)989-4045
Attn: Rachelle Arada
Page: 5

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817

Our Lab I.D.			87764.04	87764.05	87764.06	87764.07	87764.08
Client Sample I.D.			1702036-42	1702036-46	1702036-51	1702036-69	1702036-74
Date Sampled			05/15/2017	05/15/2017	05/15/2017	05/15/2017	05/15/2017
Date Prepared			05/18/2007	05/18/2007	05/18/2007	05/18/2007	05/18/2007
Preparation Method			3550B	3550B	3550B	3550B	3550B
Date Analyzed			05/19/2017	05/19/2017	05/19/2017	05/19/2017	05/19/2017
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Acifluorfen	20	20	ND	ND	ND	ND	ND
Bentazon	10	10	ND	ND	ND	ND	ND
Chloramben	10	10	ND	ND	ND	ND	ND
2,4-D	10	10	ND	ND	ND	ND	ND
Dalapon	20	20	ND	ND	ND	ND	ND
2,4-DB	10	10	ND	ND	ND	ND	ND
DCPA diacid	20	20	ND	ND	ND	ND	ND
Dicamba	10	10	ND	ND	ND	ND	ND
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND	ND	ND
Dichloroprop	10	10	ND	ND	ND	ND	ND
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND	ND	ND	ND	ND
MCPA	2000	2000	ND	ND	ND	ND	ND
MCPP	2000	2000	ND	ND	ND	ND	ND
4-Nitrophenol	10	10	ND	ND	ND	ND	ND
Pentachlorophenol (PCP)	10	10	ND	ND	ND	ND	ND
Picloram	10	10	ND	ND	ND	ND	ND
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND	ND	ND
2,4,5-TP	10	10	ND	ND	ND	ND	ND
Our Lab I.D.			87764.04	87764.05	87764.06	87764.07	87764.08
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
DCAA	40-150		40.2	42.2	63.7	42.7	50.0

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ANALYTICAL RESULTS

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Page: 6

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817

Our Lab I.D.			87764.09	87764.10	87764.11	87764.12	87764.13
Client Sample I.D.			1702036-77	1702036-85	1702036-90	1702036-92	1702036-95
Date Sampled			05/15/2017	05/16/2017	05/16/2017	05/16/2017	05/16/2017
Date Prepared			05/18/2007	05/18/2007	05/18/2007	05/18/2007	05/18/2007
Preparation Method			3550B	3550B	3550B	3550B	3550B
Date Analyzed			05/19/2017	05/19/2017	05/19/2017	05/19/2017	05/19/2017
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Acifluorfen	20	20	ND	ND	ND	ND	ND
Bentazon	10	10	ND	ND	ND	ND	ND
Chloramben	10	10	ND	ND	ND	ND	ND
2,4-D	10	10	ND	ND	ND	ND	ND
Dalapon	20	20	ND	ND	ND	ND	ND
2,4-DB	10	10	ND	ND	ND	ND	ND
DCPA diacid	20	20	ND	ND	ND	ND	ND
Dicamba	10	10	ND	ND	ND	ND	ND
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND	ND	ND
Dichloroprop	10	10	ND	ND	ND	ND	ND
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND	ND	ND	ND	ND
MCPA	2000	2000	ND	ND	ND	ND	ND
MCPP	2000	2000	ND	ND	ND	ND	ND
4-Nitrophenol	10	10	ND	ND	ND	ND	ND
Pentachlorophenol (PCP)	10	10	ND	ND	ND	ND	ND
Picloram	10	10	ND	ND	ND	ND	ND
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND	ND	ND
2,4,5-TP	10	10	ND	ND	ND	ND	ND
Our Lab I.D.			**87764.09**	**87764.10**	**87764.11**	**87764.12**	**87764.13**
Surrogates	**%Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
DCAA	40-150		51.2	57.5	48.5	53.2	51.0

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ANALYTICAL RESULTS

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Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817

Our Lab I.D.			**87764.14**				
Client Sample I.D.			1702036-AA				
Date Sampled			05/16/2017				
Date Prepared			05/18/2007				
Preparation Method			3550B				
Date Analyzed			05/19/2017				
Matrix			Soil				
Units			ug/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
Acifluorfen	20	20	ND				
Bentazon	10	10	ND				
Chloramben	10	10	ND				
2,4-D	10	10	ND				
Dalapon	20	20	ND				
2,4-DB	10	10	ND				
DCPA diacid	20	20	ND				
Dicamba	10	10	ND				
3,5-Dichlorobenzoic acid	10	10	ND				
Dichloroprop	10	10	ND				
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	20	20	ND				
MCPA	2000	2000	ND				
MCPP	2000	2000	ND				
4-Nitrophenol	10	10	ND				
Pentachlorophenol (PCP)	10	10	ND				
Picloram	10	10	ND				
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND				
2,4,5-TP	10	10	ND				
Our Lab I.D.			**87764.14**				
Surrogates	**%Rec.Limit**		**% Rec.**				
DCAA	40-150		51.4				

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Page: 8

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817

Our Lab I.D.			87764.15				
Client Sample I.D.			1702036-AM				
Date Sampled			05/16/2017				
Date Prepared			05/18/2007				
Preparation Method			3550B				
Date Analyzed			05/19/2017				
Matrix			Soil				
Units			ug/Kg				
Dilution Factor			5				
Analytes	**MDL**	**PQL**	**Results**				
Acifluorfen	100	100	ND				
Bentazon	50	50	ND				
Chloramben	50	50	ND				
2,4-D	50	50	ND				
Dalapon	100	100	ND				
2,4-DB	50	50	ND				
DCPA diacid	100	100	ND				
Dicamba	50	50	ND				
3,5-Dichlorobenzoic acid	50	50	ND				
Dichloroprop	50	50	ND				
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	100	100	ND				
MCPA	10000	10000	ND				
MCPP	10000	10000	ND				
4-Nitrophenol	50	50	ND				
Pentachlorophenol (PCP)	50	50	ND				
Picloram	50	50	ND				
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	50	50	ND				
2,4,5-TP	50	50	ND				

Comment(s):
87764.15: Analyzed under dilution due to matrix interference

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ANALYTICAL RESULTS

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

Our Lab I.D.			87764.15				
Surrogates	%Rec.Limit		% Rec.				
DCAA	40-150		48.5				

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QUALITY CONTROL RESULTS

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Page: **10**

Project ID: 1702036
Project Name: PO# SC11608

AETL Job Number	Submitted	Client
87764	05/18/2017	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 051817; Dup or Spiked Sample: 87763.02; LCS: Clean Sand; QC Prepared: 05/18/2007; QC Analyzed: 05/19/2017; Units: ug/Kg

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
2,4-D	0.00	25.0	11.2	44.8	25.0	11.4	45.6	1.8	40-140	<40
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	0.00	25.0	17.6	70.4	25.0	17.8	71.2	1.1	40-140	<40
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	0.00	25.0	10.3	41.2	25.0	11.3	45.2	9.3	40-140	<40
Surrogates										
DCAA	0.00	50.0	38.9	77.8	50.0	26.4	52.8	38.3	40-140	<40

QC Batch No: 051817; Dup or Spiked Sample: 87763.02; LCS: Clean Sand; QC Prepared: 05/18/2007; QC Analyzed: 05/19/2017; Units: ug/Kg

Analytes	LCS Concen	LCS Recov	LCS % REC	LCS DUP Concen	LCS DUP Recov	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit	
2,4-D	25.0	12.7	50.8	25.0	19.2	76.8	40.8	50-140	<40	
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	25.0	21.0	84.0	25.0	17.6	70.4	17.6	50-140	<40	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	25.0	19.6	78.4	25.0	12.5	50.0	44.2	50-140	<40	
LCS										
Dalapon	25.0	20.8	83.2	25.0	21.8	87.2	4.7	50-140	<40	
2,4-DB	25.0	29.0	116	25.0	20.4	81.6	34.8	50-140	<40	
Dicamba	25.0	15.6	62.4	25.0	15.9	63.6	1.9	50-140	<40	
Dichloroprop	25.0	21.5	86.0	25.0	15.2	60.8	34.3	50-140	<40	
MCPA	2,500	3,350	134	2,500	2,680	107	22.4	50-140	<40	
MCPP	2,500	3,450	138	2,500	2,170	86.8	45.6	50-140	<40	
2,4,5-TP	25.0	20.5	82.0	25.0	16.9	67.6	19.3	50-140	<40	
Surrogates										
DCAA	50.0	28.3	56.6	50.0	28.8	57.6	1.8	50-140	<40	

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Data Qualifiers and Descriptors

Data Qualifier:

#:	Recovery is not within acceptable control limits.
*:	In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
B:	Analyte was present in the Method Blank.
D:	Result is from a diluted analysis.
E:	Result is beyond calibration limits and is estimated.
H:	Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
J:	Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
M:	Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
MCL:	Maximum Contaminant Level
NS:	No Standard Available
S6:	Surrogate recovery is outside control limits due to matrix interference.
S8:	The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
X:	Results represent LCS and LCSD data.

Definition:

%Limi:	Percent acceptable limits.
%REC:	Percent recovery.
Con.L:	Acceptable Control Limits
Conce:	Added concentration to the sample.
LCS:	Laboratory Control Sample
MDL:	Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.

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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

ADVANCED TECHNOLOGY LABORATORIES

87764

SUBCONTRACT ORDER

Work Order: 1702036

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachelle Arada (Rachelle@atlglobal.com)
Sampler: DAT

RECEIVING LABORATORY:

AETL
2834 North Naomi Street
Burbank, CA 91504
Phone :(818) 845-8200
Fax: (818) 845-8840
PO#: SC11608- STANDARD TAT (RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis		Due	Expires	Sampled	Comments
ATL Lab#: 1702036-22	**/ 2A-1-1.0**		**Soil**	**05/15/17 14:08**	87764.01
8151_SUB		**05/25/17 17:00**	05/29/17 14:08		
[Chlorinated Herbicides]					
1-Glass Jar - 4 oz					
ATL Lab#: 1702036-26	**/ 2A-2-1.0**		**Soil**	**05/15/17 14:34**	87764.02
8151_SUB		**05/25/17 17:00**	05/29/17 14:34		
[Chlorinated Herbicides]					
1-Glass Jar - 4 oz					
ATL Lab#: 1702036-38	**/ 6-1-1.0**		**Soil**	**05/15/17 10:07**	87764.03
8151_SUB		**05/25/17 17:00**	05/29/17 10:07		
[Chlorinated Herbicides]					
1-Glass Jar - 4 oz					
ATL Lab#: 1702036-42	**/ 6-3-1.0**		**Soil**	**05/15/17 10:35**	87764.04
8151_SUB		**05/25/17 17:00**	05/29/17 10:35		
[Chlorinated Herbicides]					
1-Glass Jar - 4 oz					

Released By	5/18/17 1038 Date	Received By	5/18/17 1038 Date
Released By	5/18/17 1252 Date	Received By	05/18/17 1252 Date

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

87764

Work Order: 1702036

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1702036-46 / 6-4-1.0 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/29/17 12:07	**05/15/17 12:07**	87764.05
ATL Lab#: 1702036-51 / 6-5-3.0 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/29/17 12:33	**05/15/17 12:33**	87764.06
ATL Lab#: 1702036-69 / 7-2-0.5 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/29/17 13:45	**05/15/17 13:45**	87764.07
ATL Lab#: 1702036-74 / 7-3-1.0 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/29/17 13:35	**05/15/17 13:35**	87764.08
ATL Lab#: 1702036-77 / 7-4-0.5 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/29/17 13:13	**05/15/17 13:13**	87764.09
ATL Lab#: 1702036-85 / 6-2-0.5 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/30/17 07:17	**05/16/17 07:17**	87764.10

Released By	Date	Received By	Date
	5/18/17 1038	Agilent Hoyer	5/18/17 1038
	5/18/17 1252	Jean Claude	05/18/17 1252

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1702036

87764

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1702036-90 / 7-1-1.0 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/30/17 07:42	**05/16/17 07:42**	87764.11
ATL Lab#: 1702036-92 / 7-5-1.0 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/30/17 08:11	**05/16/17 08:11**	87764.12
ATL Lab#: 1702036-95 / 7-6-0.5 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/30/17 08:34	**05/16/17 08:34**	87764.13
ATL Lab#: 1702036-AA / 7-7-1.0 8151_SUB [Chlorinated Herbicides]	**05/25/17 17:00**	**Soil** 05/30/17 08:23	**05/16/17 08:23**	**1-Glass Jar - 4 oz** 87764.14
ATL Lab#: 1702036-AM / 8-3-1.0 8151_SUB [Chlorinated Herbicides] 1-Glass Jar - 4 oz	**05/25/17 17:00**	**Soil** 05/30/17 08:52	**05/16/17 08:52**	87764.15

Released By	5/18/17 1038 Date	Received By	5/18/17 1038 Date
Released By	5/18/17 1252 Date	Received By	Jean Claude 05/18/17 1252 Date

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COOLER RECEIPT FORM

Client Name: ATL

Project Name:

AETL Job Number: 87764, 87765, 87766, 87767 & 87768

Date Received: 05/18/17 Received by: Jean Claude

Carrier: ☒ AETL Courier ☐ Client ☐ GSO ☐ FedEx ☐ UPS
☐ Others:

Samples were received in: ☒ Cooler (|) ☐ Other (Specify):

Inside temperature of shipping container No 1: 3.6°, No 2: _____, No 3: _____

Type of sample containers: ☐ VOA, ☒ Glass bottles, ☒ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify): _____

How are samples preserved: ☐ None, ☐ Ice, ☒ Blue Ice, ☐ Dry Ice
☒ None, _ HNO_3, _ NaOH, _ ZnOAc, _ HCl, _ $Na_2S_2O_3$, _ MeOH
☒ Other (Specify): H_2SO_4

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	X		
2. Are the Sample labels legible?	X		
3. Do samples match the COC?	X		
4. Are the required analyses clear?	X		
5. Is there enough samples for required analysis?	X		
6. Are samples sealed with evidence tape?	NA		
7. Are sample containers in good condition?	X		
8. Are samples preserved?	X		
9. Are samples preserved properly for the intended analysis?	X		
10. Are the VOAs free of headspace?	NA		
11. Are the jars free of headspace?	2		

Explain all "No" answers for above questions:

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CHAIN OF CUSTODY RECORD

Page 1 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20170715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other:	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☑
	3. CONTAINER INTACT	☑	☐	7. COOLER TEMP, deg C	6.2, 5.1	
	4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand & Assoc HAI
Address: 250 GODDARD
City: IRVINE State: CA Zip: 92618
Tel: (949) 777-1266 Fax: (949) 777-1276

SEND REPORT TO:
Attn: Naresh Bellana Email: naresh@haieng.com
Company: HAI
Address:
City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: SAME Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: 6th St. Bridge
Project No.: LAC-17-001
Sampler: DAT
Quote No: E17ES1
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time
1	1703036-1	1A-1 - 0.5	5-15	7:28
2	-2	1A-1 - 1.0		7:28
3	-3	1A-1 - 3.0		7:32
4	-4	1A-1 - 5.0		7:32
5	-5	1A-2 - 0.5		7:47
6	-6	1A-2 - 1.0		7:47
7	-7	1A-2 - 3.0		7:52
8	-8	1A-2 - 5.0		7:52
9				
10				

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

ITEM	TAT	Container #	Container Type: 1=Tube, 2=VOA, 3=Liter, 4=Pint, 5=1/2 gl, 6=Brass, 7=Canister	Container Material: 1=Glass, 2=Plastic, 3=Metal	Container Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=NaOH, 5=ZnAc+NaOH, 6=MeOH, 7=NaHSO3	REMARKS
1	5	1	1	2	N/A	
2		1	1			
3		1	1			
4		1	1			
5		1	1			
6		1	1			
7		1	1			
8		1	1			

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply.
   TAT = 0 : 100% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - - - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, all samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report, $35 per reprocessed EDD.
10. Rush ECLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $2 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Don Terrs	5-16-17	1:57		5/16/17	1357

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATL COC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ Fedex ☐ On Trac	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ GSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

Container: Type: 1=Tedlar, 2=VOA, 3=Glass, 4=Poly, 5=Air, Bottle qty, 7=Canister; Material: 1=Glass, 2=Plastic, 3=Metal; Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Zn(Ac)2, 6=NaOH+ZnAc, 7=MeOH, 8=NaHSO4

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	TAT	Container: •	Type	Material	Preservative	REMARKS
1	1702036 -9	1A-3 - 0.5	5-15	8:00	5	1	1	2	W	
2	-10	1A-3 - 1.0		8:00						
3	-11	1A-3 - 3.0		8:02						
4	-12	1A-3 - 5.0		8:02						
5										
6	-13	1A-4 - 0.5		8:15						
7	-14	1A-4 - 1.0		8:15						
8	-15	1A-4 - 3.0		8:19						
9	-16	1A-4 - 5.0		8:19						
10										

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday after hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab — ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $42.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush PCBP/SPLP samples: add 2 days to analysis TAT for extraction procedure.
11. Unpreserved samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Don Terres	5-16-17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt				
	Condition	Y / N	Condition	Y / N	
☑ Client ☐ ATL	1. CHILLED	☐ ☐	5. # OF SAMPLES MATCH COC	☐ ☐	
☐ FedEx ☐ Ontrac	2. HEADSPACE (VOA)	☐ ☐	6. PRESERVED	☐ ☐	
☐ GSO	3. CONTAINER INTACT	☐ ☐	7. COOLER TEMP, deg C:		
☐ Other: ______	4. SEALED	☐ ☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.: | PO #:
Sampler:

ITEM	Lab No.	Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	~~8081(Organochlorine Pesticides)~~	~~8082(PCBs)~~	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	8081 (PESTICIDES)	8082 (PCBs)	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	#	Type	Material	Preservative	REMARKS
1	1702036-17	1B-1 - 0.5	5-15	8:32							X										5	1	1	2	N/A	
2	-18	1B-1 - 1.0	↓	8:32							X										↓	1	1	2	↓	
3	-19	1B-1 - 3.0	↓	8:51							X										↓	1	1	2	↓	
4	-20	1B-1 - 5.0	↓	8:37							X										↓	1	1	2	↓	
5																										
6	-21	2A-1 - 0.5	↓	2:08							X										5	1	1	2	↓	
7	-22	2A-1 - 1.0	↓	2:08	X	X	X	X			X		X	X	X						5	1	1	2	↓	
8	-23	2A-1 - 3.0	↓	2:13	X	X	X	X			X										↓	1	1	2	↓	
9	-24	2A-1 - 5.0	↓	2:13							X										↓	1	1	2	↓	
10																										

Container codes: Type: 1=Tube, 2=VOA, 3=Liter, 4=Pint, 5=Jar, 6=Tedlar, 7=Canister. Material: 1=Glass, 2=Plastic, 3=Metal. Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=4C, 5=Zn(AcO)2, 6=NaOH, 7=NaS2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
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6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report. $35 per reprocessed EDD.
10. Rush TCLP/STLC samples, add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name ______ Signature ______

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature] Don Terrel	5-16	1:57	[signature]	5/16/17	1357

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 4 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL ☐ FedEx ☐ Contract ☐ GSO ☐ Other:	Condition	Y	N	Condition	Y	N
	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.:
Sampler: | PO #:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES
1	1702936 -25	2A-2 - 0.5	5-15	2:34							X		
2	-26	2A-2 - 1.0		2:34	X	X	X	X	X	X	X	X	
3	-27	2A-2 - 3.0		2:38							X		
4	-28	2A2 - 5.0		2:38	X	X	X	X			X		
5													
6	-29	5-1 - 0.5		9:47							X		
7	-30	5-1 - 1.0		9:47							X		
8	-31	5-1 - 2.0		9:47							X		
9	-32	5-1 - 3.0		9:47							X		
10													

Encircle or Write Requested Analysis

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

TAT	Container #	Container Type	Container Material	Preservative	QA/QC	REMARKS
5	1	1	2	N/A	☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	
5	1	1	2			
5	1	1	2			
5	1	1	2			
	1	1	2			
	1	1	2			
	1	1	2			
	1	1	2			

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 200% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 35% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerate/reformat ed report; $35 per regenerated EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction/ preparation procedure.
11. Unpreserved samples will incur a disposal fee of $5 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

	Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
1	Dan Terris	5/16/17	1:57		5/16/17	13:57
2						
3						

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 5 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715		
Method of Transport		Sample Conditions Upon Receipt				
		Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C		
☐ Other		4. SEALED	☐	☐			

CUSTOMER

Company:
Address:
Tel:
City: State: Zip: Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE/ FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type*	Container: Material	Container: Preservative	REMARKS
1	1702436-33	5-2-0.5	5-15	9:55							X								5	1	1	2	N/A	
2	-34	5-2-1.0		9:55							X													
3	-35	5-2-2.0		9:55							X													
4	-36	5-2-3.0		9:55							X													
5																								
6	-37	6-1-0.5		10:07							X													
7	-38	6-1-1.0		10:07	X	X	X	X	X	X	X		X											
8	-39	6-1-3.0		10:25							X													
9	-40	6-1-5.0		10:25							X													
10																								

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # / Type* (1-Tube, 2-x/OA, 3-Liter, 4-Pint, 5-Jar, 6-Bladder, 7-Canister) / Material: (1-Glass, 2-Plastic, 3-Metal) / Preservative: (1-HCl, 2-HNO3, 3-H2SO4, 4-4C, 5-Zn (Ac)2, 6-NaOH, 7-NaHSO4)

QA/QC
☐ Routine
☐ Caltrans
☐ Legal
☐ RWQCB
☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
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8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted/edited report $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Jim DeTerra	5-16-17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 6 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver. 20130715		
Method of Transport		Sample Conditions Upon Accept				
		Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ UPS/DX		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other _____		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:		SEND INVOICE TO: ☐ same as SEND REPORT TO	
Attn:	Email:	Attn:	Email:
Company:		Company:	
Address:		Address:	
City:	State: Zip:	City:	State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Type: 1=Tube, 2=VOA, 3=Liter, 4=Pint, 5=Jar, 6=Encore, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=NaOH, 5=ZnAc2(NaOH), 6=NaOH, 7=NaAsO2	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	17020350 -41	6-3-0.5	5-15	10:35							X								5	1	1	2	N/A		
2	-42	6-3-1.0		10:35	X	X	X	X	X	X	X		X												
3	-43	6-3-3.0		10:38							X														
4	-44	6-3-5.0		10:38							X														
5																									
6	-45	6-4-0.5		12:07							X														
7	-46	6-4-1.0		12:07	X	X	X	X	X	X	X		X												
8	-47	6-4-3.0		12:24							X														
9	-48	6-4-5.0		12:24							X														
10																									

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:30 AM
   - TAT = 1 : 150% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT = 10 - 15 business days. Projects requiring shorter TAT will incur a surcharge respective to the subcontract lab - - ask for quote.
6. Liquid and solid samples will be disposed of after 15 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records retained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report; $35 per reprocessed EDD
10. Rush TCLP/STLC samples: add 3 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dow Terry	5-16-17	1:57		5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 7 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ FedEx ☐ OnTrac	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ GSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.: | PO #:
Sampler:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES
1	170 2036 -49	6-5 - 0.5	5-15	12:30							X		
2	-50	6-5-1.0		12:30							X		
3	-51	6.5-3.0		12:33	X	X	X	X	X	X	X		X
4	-52	6-5-5.0		12:33							X		
5													
6	-53	6-6-1.0		11:12							X		
7	-54	6-6-3.0		11:12							X		
8	-55	6-6-5.0		11:12							X		
9	-56	6-6-7.5		11:12							X		
10													

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE | SOLIDS / WIPE / FILTER | WATER - DRINKING / GROUND | WATER - STORM / WASTE | AQUEOUS / LAYERED - OIL

TAT	Container #	Container Type: 1=Tube, 2=VOA, 3=Liter, 4=Pint, 5=Jar, 6=Bag, 7=Canister	Container Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=4°C, 5=Zn(Ac)2, 6=NaOH, 7=MeOH, 8=DI	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
5	1	1	2	N/A		
↓	↓	↓	↓	↓		

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 5:00 PM, are considered received the following business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 200% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be discarded after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $10/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $12.50 per hard copy report requested, $50.00 per regenerated/reformatted report, $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Towes	5/15/17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other	Condition	Y	N	Condition	Y	N
	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. (deg C):		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:		Tel:
	City:	State: Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type: 1-Tube; 2-VOA; 3-Liter; 4-Pint; 5-Jar; 6-Other; 7-Cassette	Container: Material: 1-Glass, 2-Plastic, 3-Metal	Container: Preservative: 1-HCl; 2-HNO3; 3-H2SO4; 4-NaOH; 5-Zn(Ac)2; 6-NaOH+ZnAc; 7-MeOH; 8-NaHSO4; 9-DI	REMARKS
1	1702036-57	6-7-1.0	5-15	11:19							X								5	1	1	2	3	N/A
2	-58	6-7-3.0		11:19							X													
3	-59	6-7-5.0		11:22							X													
4	-60	6-7-7.5		11:22							X													
5																								
6	-61	6-9-1.0		10:58	X						X													
7	-62	6-9-3.0		10:58	X						X													
8	-63	6-9-5.0		11:00							X													
9	-64	6-9-7.5		11:00							X													
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT is 10 – 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or RUSH is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 7 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Terrell	5-16-17	1:57	[illegible]	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 9 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATLCOC Ver: 20130715
Method of Transport		Sample Conditions Upon Receipt			
		Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ On Trac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:		SEND INVOICE TO: ☐ same as SEND REPORT TO	
Attn:	Email:	Attn:	Email:
Company:		Company:	
Address:		Address:	
City:	State: Zip:	City:	State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type: 1: Jars; 2: VOA; 3: Liter; 4: Pint; 5: Jar; 6: Tube; 7: Canister	Container: Material: 1: Glass; 2: Plastic; 3: Metal	Preservative: 1: HCl; 2: HNO3; 3: H2SO4; 4: NaOH; 5: Zinc Acetate; 6: Ascorbic Acid; 7: NH4Cl	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	1702035-05	6-10-1.0	5-15	10:48	X						X								5	1	1	2	MA	
2	-06	6-10-3.0		10:48	X						X													
3	-07	6-10-5.0		10:52							X													
4	-08	6-10-7.5		10:52							X													
5																								
6	-09	7-2-0.5		1:45	X	X	X	X	X	X	X		X											
7	-10	7-2-1.0		1:45							X													
8	-11	7-2-3.0		1:48	X	X	X	X			X													
9	-12	7-2-5.0		1:48							X													
10																								

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 200% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract fee - ask for quote.
6. Aqueous and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for three (3) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples, $2/sample/month of extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $20/ sample/week of extended storage is requested.
   - Hard copy and regenerated report/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report, $35 per reprocessed EDD.
10. Push TCLP/SPLP samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Doug Terrell	5-16-17	1:57	FED-EX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715		
Method of Transport		Sample Conditions Upon Receipt				
		Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	TAT	Container: #	Container: Type	Container: Material	Container: Preservative	REMARKS
1	1702136-73	7-3 -0.5	5-15	1:35							X			5	1	1	2	MA	
2	-74	7-3-1.0		1:35	X	X	X	X	X	X	X		X						
3	-75	7-3-3.0		1:38							X								
4	-76	7-3-5.0		1:38	X	X	X	X			X								
5																			
6	-77	7-4-0.5		1:13	X	X	X	X	X	X	X		X						
7	-78	7-4-1.0		1:13							X								
8	-79	7-4-3.0		1:15	X	X	X	X			X								
9	-80	7-4-5.0		1:15							X								
10																			

Encircle or Write Requested Analysis

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

Container: Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Brass; 7=Canister. Material: 1=Glass; 2=Plastic; 3=Metal. Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4°C; 5=ZnAc+NaOH; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM
3. The following turnaround time conditions apply:
   - TAT = 0 : 200% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5TH BUSINESS DAY (COB 5:00 PM)
4. Weekends, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples, $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested, $50.00 per regenerated/reformatted report, $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on prior date.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Quan Tang	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 11 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATL COC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL	Condition	Y	N	Condition	Y	N
☐ FedEx ☐ Courier	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ UPS	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other:	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type	Container: Material	Preservative	REMARKS
1	1703076-21	6-8-~~0.5~~ 1.0	5-15	11:29							X								5	1	1	2	N/A	
2	-22	6-8-~~1.0~~ 3.0	↓	11:29							X									1	1			
3	-23	6-8-~~3.0~~ 5.0		11:33							X									1	1			
4	-24	6-8-~~5.0~~ 7.5		11:33							X									1	1			
5																								
6	-25	6-~~8~~-0.5	5-16	7:17					X	X	X		X							1				
7	-26	6-~~8~~-1.0		7:17							X									1				
8	-27	6-~~8~~-3.0		7:19	X	X	X	X			X									1				
9	-28	6-~~8~~-5.0	↓	7:19							X								↓	1	↓	↓	↓	
10																								

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # / Type: 1-Tube, 2-VOA, 3-Liter, 4-Pint, 5-Jar, 6-Ziploc, 7-Canister / Material: 1-Glass, 2-Plastic, 3-Metal

Preservative: 1-HCl, 2-HNO3, 3-H2SO4, 4-<4C, 5-Zn(Ac)2, 6-NaOH, 7-NA2S2O3

QA/QC
- ☐ Routine
- ☐ Caltrans
- ☐ Legal
- ☐ RWQCB
- ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 100% Surcharge SAME BUSINESS DAY (if received by 9:00 AM)
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; 10 samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complementary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complementary storage for ten (10) calendar days from receipt of samples; $10/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per regenerated EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Torres	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 12 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL		Condition	Y	N	Condition	Y	N
☐ FedEx ☐ Contract	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ GSO	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ Other _____	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name: | Quote No: | Special Instructions/Comments:
Project No.: | PO #:
Sampler:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	TAT	Container: #	Type: 1=Tedlar, 2=VOA, 3=Liter, 4=Pint, 5=Liter, 6=Tedlar, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=4C, 5=Unpreserved, 6=NaOH, 7=NaHSO3	QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	1702036-89	7-1-0.5	5/16	7:42	X	X	X	X			X			5	1	1	2	N/A		
2	-90	7-1-1.0		7:42	X	X	X	X	X	X	X		X							
3		7-1-3.0									X									
4		7-1-5.0									X									
5																				
6	-91	7-5-0.5		8:11							X									
7	-92	7-5-1.0		8:11	X	X	X	X	X	X	X		X							
8	-93	7-5-3.0		8:13							X									
9	-94	7.5-5.0		8:13	X	X	X	X			X									
10																				

TERMS

1. Sample receiving hours: 7:30 AM to 7:00 PM Monday - Friday, Saturday 9:00 AM to 12:00 PM
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3. The following turnaround time conditions apply.
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 7:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 14 calendar days from receipt of samples, or samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples. $2/sample/month of extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $30/ sample/week if extended storage is requested.
   Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformat of report; $15 per report issued EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction to be performed.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Dow Tevis	5-16-17	1:57		5/16/17	1357

ADVANCED TECHNOLOGY LABORATORIES

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CHAIN OF CUSTODY RECORD

Page 13 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt			
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL ☐ Fedex ☐ Contract ☐ GSO ☐ Other	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C		
	4. SEALED	☐	☐			

CUSTOMER

Company:
Address:
Tel:
City:
State:
Zip:
Fax:

SEND REPORT TO:
Attn:
Email:
Company:
Address:
City:
State:
Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn:
Email:
Company:
Address:
City:
State:
Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Container: Type	Container: Material	Container: Preservative	REMARKS
1	1702036 -95	7-6-0.5	5/16	8:34	X	X	X	X	X	X	X		X						5	1	1	2	N/A	
2	-96	7-6-1.0	↓	8:34							X								↓	↓	↓	↓	↓	
3	-97	7-6-3.0		8:36							X													
4	-98	7-6-5.0		8:36	X	X	X	X			X													
5																								
6	-99	7-7-0.5		8:23							X													
7	-AA	7-7-1.0		8:23					X	X	X		X											
8	-AB	7-7-3.0		8:25	X	X	X	X			X													
9	-AC	7-7-5.0	↓	8:25	X	X	X	X			X								↓	↓	↓	↓	↓	
10																								

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving Hours: 7:30 AM to 7:30 PM Monday - Friday, Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 200% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, no samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $12.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 7 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Tevis	5-16-17	1:57	FedEx	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date	Time
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
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CHAIN OF CUSTODY RECORD

Page 14 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only			ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt		
	Condition	Y	N
☐ Client ☐ ATL	1. CHILLED	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐
☐ Other	4. SEALED	☐	☐
	5. # OF SAMPLES MATCH COC	☐	☐
	6. PRESERVED	☐	☐
	7. COOLER TEMP, deg C:		

CUSTOMER

Company:	Address:			Tel:
	City:	State:	Zip:	Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:	Attn: Email:
Company:	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name:	Quote No:	Special Instructions/Comments:
Project No.:	PO #:	
Sampler:		

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	LEAD	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container	QA/QC
1	17053C-AD	8-1-0.5	5/16	9:17										X								
2	-AE	8-1-1.0		9:17										X								
3	-AF	8-1-3.0		9:20										X								
4	-AG	8-1-5.0		9:20										X								
5																						
6	-AH	8-2-0.5		9:08										X								
7	-AI	8-2-1.0		9:08										X								
8	-AJ	8-2-3.0		9:11										X								
9	-AK	8-2-5.0		9:11										X								
10																						

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # | Type: 1=Tube; 2=VOA, 3=Liter, 4=Pint; 5=Jar; 6=Tedlar, 7=Canister | Material: 1=Glass, 2=Plastic, 3=Metal | Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Zn (Ac)2, 6=NaOH+ZnAc, 7=NaHSO3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

REMARKS

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 35% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 25% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $30/ sample/week if extended storage is requested.
   - Hard copy and regenerated report/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report, $15 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unpreserved samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
DonTerres	5-16-17	1:57	FEDEX	5/16/17	1357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

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Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 15 of 15

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver. 20130715

Method of Transport	Sample Conditions Upon Receipt					
☐ Client ☐ ATL ☐ FedEx ☐ Courier ☐ GSO ☐ Other:	Condition	Y	N	Condition	Y	N
	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company:

Address:

Tel:

City: State: Zip: Fax:

SEND REPORT TO:
Attn: Email:
Company:
Address:
City: State: Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	HERBICIDES	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container: #	Type: 1=Tube, 2=VOA, 3=Liter, 4=Pint: Sulfur, 6=Teflon, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=4C Zn(Ac)2, 6=NaOH, 7=NA2S2O3	REMARKS
1	1702036 - 01	8-3- 0.5	5/16	8:52							X								5	1	1	2	N/A	
2	- 02	8-3- 1.0	↓	8:52	X	X	X	X	X	X	X		X						↓	↓	↓	↓	↓	
3	- 03	8-3- 3.0		8:55							X													
4	- 04	8-3-5.0	↓	8:55	X	X	X	X			X								↓	↓	↓	↓	↓	
5																								
6																								
7																								
8																								
9																								
10																								

QA/QC
☐ Routine
☐ Caltrans
☐ Legal
☐ RWQCB
☐ Level IV

REMARKS

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
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   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 5:00 AM
   TAT = 1 : 300% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 35% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab — ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   Liquid & solid samples: Complimentary storage for thirty (30) calendar days from receipt of samples. $2/sample/month of extended storage or hold is requested.
   Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $2/sample/week if extended storage is requested.
   Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report. $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

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Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Dan Torres	5-16-17	1:57		5/16/17	357
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

Dominic Mata

From: Naresh Bellana [naresh@haieng.com]
Sent: Friday, May 26, 2017 5:10 PM
To: Rachelle Arada
Cc: Dominic Mata; Michael Leonard
Subject: LAC-17-001, Sixth St PARC - Additional Lab Tests

Hi Rachelle & Dominic,

We would like to assign the additional lab tests as per following table. I highlighted the samples which need attention earlier than others in the table.

HAI Sample ID	ATL Sample ID	Required Lab Testing	Notes
1A-1-0.5	1702036-01	STLC Cadmium TCLP Cadmium Hexavalent Chromium STLC Lead TCLP Lead	
1A-1-1.0	1702036-02	STLC Lead TCLP Lead	
1A-1-3.0	1702036-03	Hexavalent Chromium STLC Lead TCLP Lead	
1A-2-0.5	1702036-05	STLC Lead TCLP Lead	
1A-3-0.5	1702036-09	STLC Lead TCLP Lead	
1A-3-1.0	1702036-10	STLC Lead TCLP Lead	
1A-4-0.5	1702036-13	STLC Lead TCLP Lead	
5-1-1.0	1702036-30	STLC Lead TCLP Lead	
5-1-2.0	1702036-31	STLC Lead TCLP Lead	
5-2-3.0	1702036-36	STLC Lead TCLP Lead	
6-2-0.5	1702036-85	STLC Lead TCLP Lead	HIGHER PRIORITY
6-3-1.0	1702036-42	STLC Barium TCLP Barium STLC Cadmium TCLP Cadmium Hexavalent Chromium STLC Copper STLC Lead TCLP Lead STLC Zinc	HIGHER PRIORITY
6-3-3.0	1702036-43	STLC Lead TCLP Lead	HIGHER PRIORITY
6-4-1.0	1702036-46	STLC Arsenic TCLP Arsenic	

		STLC Lead TCLP Lead	
6-5-0.5	1702036-49	STLC Cadmium TCLP Cadmium Hexavalent Chromium STLC Lead TCLP Lead	
6-5-1.0	1702036-50	STLC Lead TCLP Lead	
6-8-1.0	1702036-81	STLC Lead TCLP Lead	
6-8-7.5	1702036-84	STLC Mercury TCLP Mercury	
6-9-3.0	1702036-62	STLC Antimony STLC Copper STLC Lead TCLP Lead	
6-10-1.0	1702036-65	STLC Lead TCLP Lead	
6-10-3.0	1702036-66	STLC Cadmium TCLP Cadmium STLC Lead TCLP Lead	
7-1-0.5	1702036-89	STLC Copper	
7-1-1.0	1702036-90	STLC Copper STLC Lead	
7-3-0.5	1702036-73	STLC Lead	
7-4-0.5	1702036-77	STLC Lead	
8-1-0.5	1702036-AD	STLC Copper STLC Lead	
8-1-1.0	1702036-AE	STLC Copper STLC Lead	
8-3-3.0	1702036-AN	STLC Cadmium TCLP Cadmium STLC Lead	
8-3-5.0	1702036-AO	Hexavalent Chromium	
9-1-0.5	1702042-01	STLC Lead DI-WET Lead TCLP Lead pH	
9-1-1.0	1702042-02	STLC Lead DI-WET Lead TCLP Lead	
9-2-0.5	1702042-05	STLC Lead DI-WET Lead TCLP Lead	
9-2-1.0	1702042-06	STLC Lead DI-WET Lead TCLP Lead pH	
9-3-0.5	1702042-07	STLC Lead DI-WET Lead	

		TCLP Lead	

Please let us know if you have any questions.

Thanking you,

Sincerely,

Naresh Bellana, MS, PE
Senior Staff Engineer

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. *(949) 777-1266*
d. *(949) 777-1275*
f. *(949) 777-1276*

25 Years of Service Excellence

ADVANCED TECHNOLOGY LABORATORIES

June 13, 2017

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1702036
Client Reference : 6th St Bridge, LAC-17-001

Enclosed are the results for sample(s) received on May 16, 2017 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
7-4-0.5	1702036-77	Soil	5/15/17 13:13	5/16/17 13:57
7-1-1.0	1702036-90	Soil	5/16/17 7:42	5/16/17 13:57
8-1-0.5	1702036-AD	Soil	5/16/17 9:17	5/16/17 13:57
8-1-1.0	1702036-AE	Soil	5/16/17 9:17	5/16/17 13:57
8-3-3.0	1702036-AN	Soil	5/16/17 8:55	5/16/17 13:57

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

Client Sample ID 7-4-0.5

Lab ID: 1702036-77

TCLP Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0208	06/10/2017	06/12/17 10:17	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

Client Sample ID 7-1-1.0

Lab ID: 1702036-90

TCLP Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.47**	0.25	5	B7F0191	06/09/2017	06/09/17 13:03	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

Client Sample ID 8-1-0.5

Lab ID: 1702036-AD

TCLP Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.38**	0.25	5	B7F0191	06/09/2017	06/09/17 13:04	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

Client Sample ID 8-1-1.0

Lab ID: 1702036-AE

TCLP Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.33**	0.25	5	B7F0191	06/09/2017	06/09/17 13:05	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

Client Sample ID 8-3-3.0

Lab ID: 1702036-AN

TCLP Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:45	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

QUALITY CONTROL SECTION

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0039 - EPA 3010A_S										
Blank (B7F0039-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
Blank (B7F0039-BLK2)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
LCS (B7F0039-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	0.977571	0.050	0.0067	1.00000		97.8	80 - 120			
Barium	1.01658	0.050	0.0008	1.00000		102	80 - 120			
Cadmium	0.962616	0.050	0.0002	1.00000		96.3	80 - 120			
Lead	1.01106	0.050	0.0028	1.00000		101	80 - 120			
Duplicate (B7F0039-DUP1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	ND	0.25	0.033		0.036402			NR	20	
Barium	0.149775	0.25	0.0040		0.153491			2.45	20	
Cadmium	0.001654	0.25	0.0008		0.000933			55.7	20	R
Lead	ND	0.25	0.014		ND			NR	20	
Duplicate (B7F0039-DUP2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	0.057904	0.25	0.033		0.042137			31.5	20	
Barium	0.846218	0.25	0.0040		0.873311			3.15	20	
Cadmium	0.001558	0.25	0.0008		1.3244E-3			16.2	20	
Lead	ND	0.25	0.014		ND			NR	20	
Matrix Spike (B7F0039-MS1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	2.45172	0.25	0.033	2.50000	0.036402	96.6	74 - 123			
Barium	2.54620	0.25	0.0040	2.50000	0.153491	95.7	76 - 117			
Cadmium	2.32535	0.25	0.0008	2.50000	0.000933	93.0	73 - 115			
Lead	14.7721	0.25	0.014	2.50000	ND	591	78 - 109			M1
Matrix Spike (B7F0039-MS2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	2.57287	0.25	0.033	2.50000	0.042137	101	74 - 123			
Barium	3.38545	0.25	0.0040	2.50000	0.873311	100	76 - 117			
Cadmium	2.47920	0.25	0.0008	2.50000	1.3244E-3	99.1	73 - 115			
Lead	2.45343	0.25	0.014	2.50000	ND	98.1	78 - 109			

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0039 - EPA 3010A_S (continued)										
Matrix Spike Dup (B7F0039-MSD1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Arsenic	2.49366	0.25	0.033	2.50000	0.036402	98.3	74 - 123	1.70	20	
Barium	2.51892	0.25	0.0040	2.50000	0.153491	94.6	76 - 117	1.08	20	
Cadmium	2.32480	0.25	0.0008	2.50000	0.000933	93.0	73 - 115	0.0239	20	
Lead	2.35424	0.25	0.014	2.50000	ND	94.2	78 - 109	145	20	R

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0191 - EPA 3010A_S										
Blank (B7F0191-BLK1)					Prepared: 6/9/2017 Analyzed: 6/9/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
LCS (B7F0191-BS1)					Prepared: 6/9/2017 Analyzed: 6/9/2017					
Arsenic	0.930352	0.050	0.0067	1.00000		93.0	80 - 120			
Barium	0.983390	0.050	0.0008	1.00000		98.3	80 - 120			
Cadmium	0.948554	0.050	0.0002	1.00000		94.9	80 - 120			
Lead	0.942529	0.050	0.0028	1.00000		94.3	80 - 120			
Duplicate (B7F0191-DUP1)			**Source: 1702205-01**		Prepared: 6/9/2017 Analyzed: 6/9/2017					
Arsenic	ND	0.25	0.033		ND			NR	20	
Barium	0.521614	0.25	0.0040		0.470568			10.3	20	
Cadmium	ND	0.25	0.0008		0.000762			NR	20	
Lead	ND	0.25	0.014		0.014590			NR	20	
Matrix Spike (B7F0191-MS1)			**Source: 1702205-01**		Prepared: 6/9/2017 Analyzed: 6/9/2017					
Arsenic	2.43350	0.25	0.033	2.50000	ND	97.3	74 - 123			
Barium	2.87516	0.25	0.0040	2.50000	0.470568	96.2	76 - 117			
Cadmium	2.36058	0.25	0.0008	2.50000	0.000762	94.4	73 - 115			
Lead	2.37502	0.25	0.014	2.50000	0.014590	94.4	78 - 109			
Matrix Spike Dup (B7F0191-MSD1)			**Source: 1702205-01**		Prepared: 6/9/2017 Analyzed: 6/9/2017					
Arsenic	2.28181	0.25	0.033	2.50000	ND	91.3	74 - 123	6.43	20	
Barium	2.79617	0.25	0.0040	2.50000	0.470568	93.0	76 - 117	2.79	20	
Cadmium	2.30293	0.25	0.0008	2.50000	0.000762	92.1	73 - 115	2.47	20	
Lead	2.28449	0.25	0.014	2.50000	0.014590	90.8	78 - 109	3.89	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0208 - EPA 3010A_S										
Blank (B7F0208-BLK1)					Prepared: 6/10/2017 Analyzed: 6/12/2017					
Arsenic	ND	0.050	0.0067							
Barium	ND	0.050	0.0008							
Cadmium	ND	0.050	0.0002							
Lead	ND	0.050	0.0028							
LCS (B7F0208-BS1)					Prepared: 6/10/2017 Analyzed: 6/12/2017					
Arsenic	0.944084	0.050	0.0067	1.00000		94.4	80 - 120			
Barium	0.998103	0.050	0.0008	1.00000		99.8	80 - 120			
Cadmium	0.942086	0.050	0.0002	1.00000		94.2	80 - 120			
Lead	0.974535	0.050	0.0028	1.00000		97.5	80 - 120			
Duplicate (B7F0208-DUP1)			**Source: 1702036-77RE1**		Prepared: 6/10/2017 Analyzed: 6/12/2017					
Arsenic	ND	0.25	0.033		ND			NR	20	
Barium	0.363792	0.25	0.0040		0.377100			3.59	20	
Cadmium	0.008575	0.25	0.0008		0.008645			0.818	20	
Lead	0.032722	0.25	0.014		ND			NR	20	
Matrix Spike (B7F0208-MS1)			**Source: 1702036-77RE1**		Prepared: 6/10/2017 Analyzed: 6/12/2017					
Arsenic	2.56052	0.25	0.033	2.50000	ND	102	74 - 123			
Barium	2.89084	0.25	0.0040	2.50000	0.377100	101	76 - 117			
Cadmium	2.51738	0.25	0.0008	2.50000	0.008645	100	73 - 115			
Lead	2.53775	0.25	0.014	2.50000	ND	102	78 - 109			
Matrix Spike Dup (B7F0208-MSD1)			**Source: 1702036-77RE1**		Prepared: 6/10/2017 Analyzed: 6/12/2017					
Arsenic	2.47015	0.25	0.033	2.50000	ND	98.8	74 - 123	3.59	20	
Barium	2.83853	0.25	0.0040	2.50000	0.377100	98.5	76 - 117	1.83	20	
Cadmium	2.47678	0.25	0.0008	2.50000	0.008645	98.7	73 - 115	1.63	20	
Lead	2.47801	0.25	0.014	2.50000	ND	99.1	78 - 109	2.38	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : 6th St Bridge, LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/13/2017

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Dominic Mata

From: Naresh Bellana [naresh@haieng.com]
Sent: Tuesday, June 06, 2017 12:18 PM
To: Dominic Mata
Cc: customer.relations@atlglobal.com; Rachelle Arada
Subject: RE: Completed Results/Invoice - 6th St Bridge, LAC 17-001 (ATL# 1702036)

Hi Dominic & Rachelle,

I would like to add few more tests as shown below:

HAI Sample ID	ATL Sample ID	Required Lab Testing
7-1-1.0	1702036-90	TCLP Lead
7-4-0.5	1702036-77	TCLP Lead
8-1-0.5	1702036-AD	TCLP Lead
8-1-1.0	1702036-AE	TCLP Lead
8-3-3.0	1702036-AN	TCLP Lead

Please let us know if you have any questions.

Thanking you,

Sincerely,

Naresh Bellana, MS, PE
Senior Staff Engineer

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. (949) 777-1266
d. (949) 777-1275
f. (949) 777-1276

25 Years of Service Excellence

From: Dominic Mata [mailto:dominic@atlglobal.com]
Sent: Monday, June 05, 2017 3:27 PM
To: Naresh Bellana
Cc: customer.relations@atlglobal.com
Subject: Completed Results/Invoice - 6th St Bridge, LAC 17-001 (ATL# 1702036)

Hi Naresh,

Please find your completed results and invoice for the above project attached. If I can further assist, please let me know. Thanks.

Dominic Mata
Project Coordinator

ADVANCED TECHNOLOGY LABORATORIES

March 27, 2018

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1702039
Client Reference : 6th St. , LAC-17-001

Enclosed are the results for sample(s) received on May 16, 2017 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

for

Eddie Rodriguez
Laboratory Director

Hushmand Associates, Inc.	Project Number : 6th St. , LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 03/27/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2A3-15'	1702039-01	Air	5/16/17 10:17	5/16/17 13:56
2A-3-10'	1702039-02	Air	5/16/17 10:27	5/16/17 13:56
2A-3-5'	1702039-03	Air	5/16/17 10:32	5/16/17 13:56
2A-1-15'	1702039-04	Air	5/16/17 10:50	5/16/17 13:56
2A-1-10'	1702039-05	Air	5/16/17 10:51	5/16/17 13:56
2A-1-5'	1702039-06	Air	5/16/17 10:56	5/16/17 13:56
2A-2-15'	1702039-07	Air	5/16/17 11:17	5/16/17 13:56
2A-2-10'	1702039-08	Air	5/16/17 11:17	5/16/17 13:56
2A-2-5'	1702039-09	Air	5/16/17 11:12	5/16/17 13:56
2A-2-5' Dup	1702039-10	Air	5/16/17 11:21	5/16/17 13:56
2A-AM	1702039-11	Air	5/16/17 11:33	5/16/17 13:56
6-AM	1702039-12	Air	5/16/17 11:53	5/16/17 13:56
7-4-5'	1702039-13	Air	5/16/17 12:12	5/16/17 13:56
7-4-5' Dup	1702039-14	Air	5/16/17 12:24	5/16/17 13:56
7-1-5'	1702039-15	Air	5/16/17 12:13	5/16/17 13:56
7-3-5'	1702039-16	Air	5/16/17 12:20	5/16/17 13:56
7-AM	1702039-17	Air	5/16/17 12:31	5/16/17 13:56
7-AM Dup	1702039-18	Air	5/16/17 12:31	5/16/17 13:56
8-3 Dup	1702039-19	Air	5/16/17 12:51	5/16/17 13:56

CASE NARRATIVE

The samples for TO-15 and Methane analyses were subcontracted to Air Technology Laboratories .

Air TECHNOLOGY Laboratories, Inc.

March 26, 2018

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450-14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Advanced Technology Laboratories
ATTN: Rachelle Arada
3275 Walnut Ave.
Signal Hill, CA 90755

LABORATORY TEST RESULTS

Project Reference: 1702039
Lab Number: I052202-01/19

Enclosed are **revised** results for sample(s) received 5/22/17 by Air Technology Laboratories. This revision replaces the report dated 6/05/17 in its entirety. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Report revised to display results in units of ug/m3 for EPA TO15, per client's request.
- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the TNI Standards.
- The enclosed results relate only to the sample(s).

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-01		I052202-02		I052202-03		I052202-04	
Client Sample I.D.:	1702039-01 / 2A-3-15'		1702039-02 / 2A-3-10'		1702039-03 / 2A-3-5'		1702039-04 / 2A-1-15'	
Date/Time Sampled:	5/16/17 10:17		5/16/17 10:27		5/16/17 10:32		5/16/17 10:50	
Date/Time Analyzed:	5/30/17 16:06		5/30/17 16:46		5/30/17 17:26		5/30/17 18:06	
QC Batch No.:	170530MS2A1		170530MS2A1		170530MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
Dichlorodifluoromethane (12)	ND	8.3	ND	8.6	ND	8.3	ND	8.3
Chloromethane	ND	7.0	ND	7.2	ND	7.0	ND	7.0
1,2-Cl-1,1,2,2-F ethane (114)	ND	12	ND	12	ND	12	ND	12
Vinyl Chloride	ND	4.3	ND	4.5	ND	4.3	ND	4.3
Bromomethane	ND	6.5	ND	6.8	ND	6.5	ND	6.5
Chloroethane	ND	4.4	ND	4.6	ND	4.4	ND	4.4
Trichlorofluoromethane (11)	21	9.5	27	9.8	25	9.5	ND	9.5
1,1-Dichloroethene	ND	6.7	ND	6.9	ND	6.7	ND	6.7
Carbon Disulfide	ND	26	ND	27	ND	26	300	26
1,1,2-Cl 1,2,2-F ethane (113)	ND	13	ND	13	ND	13	ND	13
Acetone	ND	20	ND	21	ND	20	66	20
Methylene Chloride	ND	5.9	ND	6.1	ND	5.9	ND	5.9
t-1,2-Dichloroethene	ND	6.7	ND	6.9	ND	6.7	ND	6.7
1,1-Dichloroethane	ND	6.8	ND	7.1	ND	6.8	ND	6.8
Vinyl Acetate	ND	30	ND	31	ND	30	ND	30
c-1,2-Dichloroethene	ND	6.7	ND	6.9	ND	6.7	ND	6.7
2-Butanone	ND	5.0	ND	5.1	9.3	5.0	34	5.0
t-Butyl Methyl Ether (MTBE)	ND	6.1	ND	6.3	ND	6.1	ND	6.1
Chloroform	ND	8.2	ND	8.5	ND	8.2	ND	8.2
1,1,1-Trichloroethane	24	9.2	25	9.5	20	9.2	63	9.2
Carbon Tetrachloride	ND	11	ND	11	ND	11	ND	11
Benzene	ND	5.4	ND	5.6	ND	5.4	5.6	5.4
1,2-Dichloroethane	ND	6.8	ND	7.1	ND	6.8	ND	6.8
Trichloroethene	ND	9.1	ND	9.4	ND	9.1	ND	9.1
1,2-Dichloropropane	ND	7.8	ND	8.1	ND	7.8	ND	7.8
Bromodichloromethane	ND	11	ND	12	ND	11	ND	11
c-1,3-Dichloropropene	ND	7.6	ND	7.9	ND	7.6	ND	7.6
4-Methyl-2-Pentanone	ND	6.9	ND	7.1	ND	6.9	ND	6.9
Toluene	9.8	6.3	ND	6.6	ND	6.3	12	6.3
t-1,3-Dichloropropene	ND	7.6	ND	7.9	ND	7.6	ND	7.6

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-01		I052202-02		I052202-03		I052202-04	
Client Sample I.D.:	1702039-01 / 2A-3-15'		1702039-02 / 2A-3-10'		1702039-03 / 2A-3-5'		1702039-04 / 2A-1-15'	
Date/Time Sampled:	5/16/17 10:17		5/16/17 10:27		5/16/17 10:32		5/16/17 10:50	
Date/Time Analyzed:	5/30/17 16:06		5/30/17 16:46		5/30/17 17:26		5/30/17 18:06	
QC Batch No.:	170530MS2A1		170530MS2A1		170530MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
1,1,2-Trichloroethane	ND	9.2	ND	9.5	ND	9.2	ND	9.2
Tetrachloroethene	29	11	28	12	25	11	360	11
2-Hexanone	ND	6.9	ND	7.1	ND	6.9	ND	6.9
Dibromochloromethane	ND	14	ND	15	ND	14	ND	14
1,2-Dibromoethane	ND	13	ND	13	ND	13	ND	13
Chlorobenzene	ND	7.8	ND	8.0	ND	7.8	ND	7.8
Ethylbenzene	ND	7.3	ND	7.6	ND	7.3	ND	7.3
p,&m-Xylene	13	7.3	ND	7.6	ND	7.3	ND	7.3
o-Xylene	ND	7.3	ND	7.6	8.1	7.3	20	7.3
Styrene	ND	7.2	ND	7.4	ND	7.2	ND	7.2
Bromoform	ND	17	ND	18	ND	17	ND	17
1,1,2,2-Tetrachloroethane	ND	23	ND	24	ND	23	ND	23
Benzyl Chloride	ND	8.7	ND	9.0	ND	8.7	ND	8.7
4-Ethyl Toluene	ND	8.3	ND	8.6	ND	8.3	ND	8.3
1,3,5-Trimethylbenzene	ND	17	ND	17	ND	17	ND	17
1,2,4-Trimethylbenzene	ND	17	ND	17	ND	17	ND	17
1,3-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,4-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,2-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,2,4-Trichlorobenzene	ND	25	ND	26	ND	25	ND	25
Hexachlorobutadiene	ND	18	ND	19	ND	18	ND	18
Naphthalene	ND	44	ND	46	ND	44	ND	44

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 3/26/18
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-05		I052202-06		I052202-07		I052202-08	
Client Sample I.D.:	1702039-05 / 2A-1-10'		1702039-06 / 2A-1-5'		1702039-07 / 2A-2-15'		1702039-08 / 2A-2-10'	
Date/Time Sampled:	5/16/17 10:51		5/16/17 10:56		5/16/17 11:17		5/16/17 11:17	
Date/Time Analyzed:	5/30/17 18:46		6/1/17 17:38		6/1/17 18:19		5/30/17 20:51	
QC Batch No.:	170530MS2A1		170601MS2A1		170601MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
Dichlorodifluoromethane (12)	ND	8.3	ND	8.3	ND	8.3	ND	8.3
Chloromethane	ND	7.0	ND	7.0	ND	7.0	ND	7.0
1,2-Cl-1,1,2,2-F ethane (114)	ND	12	ND	12	ND	12	ND	12
Vinyl Chloride	ND	4.3	ND	4.3	ND	4.3	ND	4.3
Bromomethane	ND	6.5	ND	6.5	ND	6.5	ND	6.5
Chloroethane	ND	4.4	ND	4.4	ND	4.4	ND	4.4
Trichlorofluoromethane (11)	ND	9.5	ND	9.5	ND	9.5	ND	9.5
1,1-Dichloroethene	ND	6.7	ND	6.7	ND	6.7	ND	6.7
Carbon Disulfide	120	26	27	26	ND	26	230	26
1,1,2-Cl 1,2,2-F ethane (113)	ND	13	ND	13	ND	13	ND	13
Acetone	50	20	33	20	25	20	50	20
Methylene Chloride	ND	5.9	ND	5.9	ND	5.9	6.3	5.9
t-1,2-Dichloroethene	ND	6.7	ND	6.7	ND	6.7	ND	6.7
1,1-Dichloroethane	ND	6.8	ND	6.8	ND	6.8	ND	6.8
Vinyl Acetate	ND	30	ND	30	ND	30	ND	30
c-1,2-Dichloroethene	ND	6.7	ND	6.7	ND	6.7	ND	6.7
2-Butanone	32	5.0	21	5.0	10	5.0	51	5.0
t-Butyl Methyl Ether (MTBE)	ND	6.1	ND	6.1	ND	6.1	ND	6.1
Chloroform	ND	8.2	ND	8.2	ND	8.2	ND	8.2
1,1,1-Trichloroethane	53	9.2	85	9.2	110	9.2	200	9.2
Carbon Tetrachloride	ND	11	ND	11	ND	11	ND	11
Benzene	ND	5.4	6.4	5.4	ND	5.4	ND	5.4
1,2-Dichloroethane	ND	6.8	ND	6.8	ND	6.8	ND	6.8
Trichloroethene	ND	9.1	ND	9.1	ND	9.1	ND	9.1
1,2-Dichloropropane	ND	7.8	ND	7.8	ND	7.8	ND	7.8
Bromodichloromethane	ND	11	ND	11	ND	11	ND	11
c-1,3-Dichloropropene	ND	7.6	ND	7.6	ND	7.6	ND	7.6
4-Methyl-2-Pentanone	ND	6.9	ND	6.9	ND	6.9	ND	6.9
Toluene	8.5	6.3	28	6.3	9.8	6.3	9.1	6.3
t-1,3-Dichloropropene	ND	7.6	ND	7.6	ND	7.6	ND	7.6

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-05		I052202-06		I052202-07		I052202-08	
Client Sample I.D.:	1702039-05 / 2A-1-10'		1702039-06 / 2A-1-5'		1702039-07 / 2A-2-15'		1702039-08 / 2A-2-10'	
Date/Time Sampled:	5/16/17 10:51		5/16/17 10:56		5/16/17 11:17		5/16/17 11:17	
Date/Time Analyzed:	5/30/17 18:46		6/1/17 17:38		6/1/17 18:19		5/30/17 20:51	
QC Batch No.:	170530MS2A1		170601MS2A1		170601MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
1,1,2-Trichloroethane	ND	9.2	ND	9.2	ND	9.2	ND	9.2
Tetrachloroethene	460	11	830	11	130	11	280	11
2-Hexanone	ND	6.9	ND	6.9	ND	6.9	ND	6.9
Dibromochloromethane	ND	14	ND	14	ND	14	ND	14
1,2-Dibromoethane	ND	13	ND	13	ND	13	ND	13
Chlorobenzene	ND	7.8	ND	7.8	ND	7.8	ND	7.8
Ethylbenzene	ND	7.3	ND	7.3	ND	7.3	ND	7.3
p,&m-Xylene	ND	7.3	10	7.3	ND	7.3	13	7.3
o-Xylene	ND	7.3	ND	7.3	ND	7.3	8.1	7.3
Styrene	ND	7.2	ND	7.2	ND	7.2	ND	7.2
Bromoform	ND	17	ND	17	ND	17	ND	17
1,1,2,2-Tetrachloroethane	ND	23	ND	23	ND	23	ND	23
Benzyl Chloride	ND	8.7	ND	8.7	ND	8.7	ND	8.7
4-Ethyl Toluene	ND	8.3	ND	8.3	ND	8.3	ND	8.3
1,3,5-Trimethylbenzene	ND	17	ND	17	ND	17	ND	17
1,2,4-Trimethylbenzene	ND	17	ND	17	ND	17	ND	17
1,3-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,4-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,2-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,2,4-Trichlorobenzene	ND	25	ND	25	ND	25	ND	25
Hexachlorobutadiene	ND	18	ND	18	ND	18	ND	18
Naphthalene	ND	44	ND	44	ND	44	ND	44

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 3/26/18
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-09		I052202-10		I052202-11		I052202-12	
Client Sample I.D.:	1702039-09 / 2A-2-5'		1702039-10 / 2A-2-5' Dup		1702039-11 / 2A-AM		1702039-12 / 6-AM	
Date/Time Sampled:	5/16/17 11:12		5/16/17 11:21		5/16/17 11:33		5/16/17 11:53	
Date/Time Analyzed:	6/1/17 18:59		5/30/17 22:15		5/30/17 22:56		5/30/17 23:37	
QC Batch No.:	170601MS2A1		170530MS2A1		170530MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
Dichlorodifluoromethane (12)	ND	8.3	ND	8.3	ND	8.3	ND	8.6
Chloromethane	ND	7.0	ND	7.0	ND	7.0	ND	7.2
1,2-Cl-1,1,2,2-F ethane (114)	ND	12	ND	12	ND	12	ND	12
Vinyl Chloride	ND	4.3	ND	4.3	ND	4.3	ND	4.5
Bromomethane	ND	6.5	ND	6.5	ND	6.5	ND	6.8
Chloroethane	ND	4.4	ND	4.4	ND	4.4	ND	4.6
Trichlorofluoromethane (11)	ND	9.5	ND	9.5	ND	9.5	ND	9.8
1,1-Dichloroethene	ND	6.7	ND	6.7	ND	6.7	ND	6.9
Carbon Disulfide	ND	26	300	26	50	26	30	27
1,1,2-Cl 1,2,2-F ethane (113)	ND	13	ND	13	ND	13	ND	13
Acetone	30	20	79	20	54	20	33	21
Methylene Chloride	ND	5.9	ND	5.9	ND	5.9	ND	6.1
t-1,2-Dichloroethene	ND	6.7	ND	6.7	ND	6.7	ND	6.9
1,1-Dichloroethane	ND	6.8	ND	6.8	ND	6.8	ND	7.1
Vinyl Acetate	ND	30	ND	30	ND	30	ND	31
c-1,2-Dichloroethene	ND	6.7	ND	6.7	ND	6.7	ND	6.9
2-Butanone	13	5.0	57	5.0	40	5.0	15	5.1
t-Butyl Methyl Ether (MTBE)	ND	6.1	ND	6.1	ND	6.1	ND	6.3
Chloroform	ND	8.2	ND	8.2	ND	8.2	ND	8.5
1,1,1-Trichloroethane	230	9.2	220	9.2	ND	9.2	ND	9.5
Carbon Tetrachloride	ND	11	ND	11	ND	11	ND	11
Benzene	5.7	5.4	ND	5.4	ND	5.4	ND	5.6
1,2-Dichloroethane	ND	6.8	ND	6.8	ND	6.8	ND	7.1
Trichloroethene	ND	9.1	ND	9.1	ND	9.1	ND	9.4
1,2-Dichloropropane	ND	7.8	ND	7.8	ND	7.8	ND	8.1
Bromodichloromethane	ND	11	ND	11	ND	11	ND	12
c-1,3-Dichloropropene	ND	7.6	ND	7.6	ND	7.6	ND	7.9
4-Methyl-2-Pentanone	ND	6.9	ND	6.9	ND	6.9	ND	7.1
Toluene	16	6.3	14	6.3	ND	6.3	ND	6.6
t-1,3-Dichloropropene	ND	7.6	ND	7.6	ND	7.6	ND	7.9

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-09		I052202-10		I052202-11		I052202-12	
Client Sample I.D.:	1702039-09 / 2A-2-5'		1702039-10 / 2A-2-5' Dup		1702039-11 / 2A-AM		1702039-12 / 6-AM	
Date/Time Sampled:	5/16/17 11:12		5/16/17 11:21		5/16/17 11:33		5/16/17 11:53	
Date/Time Analyzed:	6/1/17 18:59		5/30/17 22:15		5/30/17 22:56		5/30/17 23:37	
QC Batch No.:	170601MS2A1		170530MS2A1		170530MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
1,1,2-Trichloroethane	ND	9.2	ND	9.2	ND	9.2	ND	9.5
Tetrachloroethene	370	11	380	11	ND	11	ND	12
2-Hexanone	ND	6.9	ND	6.9	ND	6.9	ND	7.1
Dibromochloromethane	ND	14	ND	14	ND	14	ND	15
1,2-Dibromoethane	ND	13	ND	13	ND	13	ND	13
Chlorobenzene	ND	7.8	ND	7.8	ND	7.8	ND	8.0
Ethylbenzene	27	7.3	ND	7.3	ND	7.3	ND	7.6
p,&m-Xylene	61	7.3	19	7.3	ND	7.3	ND	7.6
o-Xylene	39	7.3	8.9	7.3	ND	7.3	ND	7.6
Styrene	ND	7.2	ND	7.2	ND	7.2	ND	7.4
Bromoform	ND	17	ND	17	ND	17	ND	18
1,1,2,2-Tetrachloroethane	ND	23	ND	23	ND	23	ND	24
Benzyl Chloride	ND	8.7	ND	8.7	ND	8.7	ND	9.0
4-Ethyl Toluene	ND	8.3	ND	8.3	ND	8.3	ND	8.6
1,3,5-Trimethylbenzene	ND	17	ND	17	ND	17	ND	17
1,2,4-Trimethylbenzene	ND	17	ND	17	ND	17	ND	17
1,3-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,4-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,2-Dichlorobenzene	ND	10	ND	10	ND	10	ND	10
1,2,4-Trichlorobenzene	ND	25	ND	25	ND	25	ND	26
Hexachlorobutadiene	ND	18	ND	18	ND	18	ND	19
Naphthalene	ND	44	ND	44	ND	44	ND	46

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 3/26/18
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-13		I052202-14		I052202-15		I052202-16	
Client Sample I.D.:	1702039-13 / 7-4-5'		1702039-14 / 7-4-5' Dup		1702039-15 / 7-1-5'		1702039-16 / 7-3-5'	
Date/Time Sampled:	5/16/17 12:12		5/16/17 12:24		5/16/17 12:13		5/16/17 12:20	
Date/Time Analyzed:	5/31/17 0:19		5/31/17 1:00		5/31/17 1:41		5/31/17 2:22	
QC Batch No.:	170530MS2A1		170530MS2A1		170530MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	5.0		5.0		1.7		3.4	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
Dichlorodifluoromethane (12)	ND	25	ND	25	ND	8.3	ND	17
Chloromethane	ND	21	ND	21	ND	7.0	ND	14
1,2-Cl-1,1,2,2-F ethane (114)	ND	35	ND	35	ND	12	ND	24
Vinyl Chloride	ND	13	ND	13	ND	4.3	ND	8.6
Bromomethane	ND	20	ND	20	ND	6.5	ND	13
Chloroethane	ND	13	ND	13	ND	4.4	ND	8.9
Trichlorofluoromethane (11)	1,400	28	1,100	28	6,400 d	9.5	210,000 d	19
1,1-Dichloroethene	ND	20	ND	20	ND	6.7	120	13
Carbon Disulfide	370	79	340	79	28	26	ND	52
1,1,2-Cl 1,2,2-F ethane (113)	ND	39	ND	39	ND	13	ND	26
Acetone	ND	60	60	60	62	20	ND	40
Methylene Chloride	ND	18	ND	18	ND	5.9	ND	12
t-1,2-Dichloroethene	ND	20	ND	20	ND	6.7	ND	13
1,1-Dichloroethane	ND	20	ND	20	ND	6.8	ND	14
Vinyl Acetate	ND	89	ND	89	ND	30	ND	59
c-1,2-Dichloroethene	ND	20	ND	20	ND	6.7	ND	13
2-Butanone	ND	15	20	15	27	5.0	ND	9.9
t-Butyl Methyl Ether (MTBE)	ND	18	ND	18	ND	6.1	ND	12
Chloroform	26	25	ND	25	ND	8.2	17	16
1,1,1-Trichloroethane	ND	28	ND	28	ND	9.2	ND	18
Carbon Tetrachloride	ND	32	ND	32	ND	11	ND	21
Benzene	ND	16	ND	16	9.0	5.4	ND	11
1,2-Dichloroethane	ND	20	ND	20	ND	6.8	ND	14
Trichloroethene	ND	27	ND	27	ND	9.1	38	18
1,2-Dichloropropane	ND	23	ND	23	ND	7.8	ND	16
Bromodichloromethane	ND	34	ND	34	ND	11	ND	23
c-1,3-Dichloropropene	ND	23	ND	23	ND	7.6	ND	15
4-Methyl-2-Pentanone	ND	21	ND	21	ND	6.9	ND	14
Toluene	23	19	22	19	11	6.3	ND	13
t-1,3-Dichloropropene	ND	23	ND	23	ND	7.6	ND	15

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-13		I052202-14		I052202-15		I052202-16	
Client Sample I.D.:	1702039-13 / 7-4-5'		1702039-14 / 7-4-5' Dup		1702039-15 / 7-1-5'		1702039-16 / 7-3-5'	
Date/Time Sampled:	5/16/17 12:12		5/16/17 12:24		5/16/17 12:13		5/16/17 12:20	
Date/Time Analyzed:	5/31/17 0:19		5/31/17 1:00		5/31/17 1:41		5/31/17 2:22	
QC Batch No.:	170530MS2A1		170530MS2A1		170530MS2A1		170530MS2A1	
Analyst Initials:	DT		DT		DT		DT	
Dilution Factor:	5.0		5.0		1.7		3.4	
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3
1,1,2-Trichloroethane	ND	28	ND	28	ND	9.2	40	18
Tetrachloroethene	ND	34	ND	34	430	11	550	23
2-Hexanone	ND	21	ND	21	ND	6.9	ND	14
Dibromochloromethane	ND	43	ND	43	ND	14	ND	29
1,2-Dibromoethane	ND	39	ND	39	ND	13	ND	26
Chlorobenzene	ND	23	ND	23	ND	7.8	ND	16
Ethylbenzene	ND	22	ND	22	ND	7.3	ND	15
p,&m-Xylene	150	22	140	22	ND	7.3	ND	15
o-Xylene	ND	22	ND	22	ND	7.3	ND	15
Styrene	ND	21	ND	21	ND	7.2	ND	14
Bromoform	ND	52	ND	52	ND	17	ND	35
1,1,2,2-Tetrachloroethane	ND	69	ND	69	ND	23	ND	46
Benzyl Chloride	ND	26	ND	26	ND	8.7	ND	17
4-Ethyl Toluene	ND	25	ND	25	ND	8.3	ND	17
1,3,5-Trimethylbenzene	ND	50	ND	50	ND	17	ND	33
1,2,4-Trimethylbenzene	ND	50	ND	50	ND	17	ND	33
1,3-Dichlorobenzene	ND	30	ND	30	ND	10	ND	20
1,4-Dichlorobenzene	ND	30	ND	30	ND	10	ND	20
1,2-Dichlorobenzene	ND	30	ND	30	ND	10	ND	20
1,2,4-Trichlorobenzene	ND	75	ND	75	ND	25	ND	50
Hexachlorobutadiene	ND	54	ND	54	ND	18	ND	36
Naphthalene	ND	130	ND	130	ND	44	ND	88

ND = Not Detected (below RL)
RL = Reporting Limit
d = Analyte reported from secondary dilution. Batch ID: 170531MS2A1

Reviewed/Approved By: _____ Date 3/26/18
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-17		I052202-18		I052202-19			
Client Sample I.D.:	1702039-17 / 7-AM		1702039-18 / 7-AM Dup		1702039-19 / 8-3 Dup			
Date/Time Sampled:	5/16/17 12:31		5/16/17 12:31		5/16/17 12:51			
Date/Time Analyzed:	6/1/17 19:40		6/1/17 20:21		5/31/17 4:25			
QC Batch No.:	170601MS2A1		170601MS2A1		170530MS2A1			
Analyst Initials:	DT		DT		DT			
Dilution Factor:	1.7		1.7		1.7			
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3		
Dichlorodifluoromethane (12)	ND	8.3	ND	8.6	ND	8.3		
Chloromethane	ND	7.0	ND	7.2	ND	7.0		
1,2-Cl-1,1,2,2-F ethane (114)	ND	12	ND	12	ND	12		
Vinyl Chloride	ND	4.3	ND	4.5	ND	4.3		
Bromomethane	ND	6.5	ND	6.8	ND	6.5		
Chloroethane	ND	4.4	ND	4.6	ND	4.4		
Trichlorofluoromethane (11)	ND	9.5	ND	9.8	32	9.5		
1,1-Dichloroethene	ND	6.7	ND	6.9	9.9	6.7		
Carbon Disulfide	ND	26	ND	27	150	26		
1,1,2-Cl 1,2,2-F ethane (113)	ND	13	ND	13	ND	13		
Acetone	21	20	ND	21	67	20		
Methylene Chloride	ND	5.9	ND	6.1	ND	5.9		
t-1,2-Dichloroethene	ND	6.7	ND	6.9	ND	6.7		
1,1-Dichloroethane	ND	6.8	ND	7.1	ND	6.8		
Vinyl Acetate	ND	30	ND	31	ND	30		
c-1,2-Dichloroethene	ND	6.7	ND	6.9	ND	6.7		
2-Butanone	ND	5.0	11	5.1	27	5.0		
t-Butyl Methyl Ether (MTBE)	ND	6.1	ND	6.3	ND	6.1		
Chloroform	ND	8.2	ND	8.5	ND	8.2		
1,1,1-Trichloroethane	ND	9.2	ND	9.5	81	9.2		
Carbon Tetrachloride	ND	11	ND	11	ND	11		
Benzene	ND	5.4	ND	5.6	22	5.4		
1,2-Dichloroethane	ND	6.8	ND	7.1	ND	6.8		
Trichloroethene	ND	9.1	ND	9.4	60	9.1		
1,2-Dichloropropane	ND	7.8	ND	8.1	ND	7.8		
Bromodichloromethane	ND	11	ND	12	ND	11		
c-1,3-Dichloropropene	ND	7.6	ND	7.9	ND	7.6		
4-Methyl-2-Pentanone	ND	6.9	ND	7.1	ND	6.9		
Toluene	ND	6.3	ND	6.6	20	6.3		
t-1,3-Dichloropropene	ND	7.6	ND	7.9	ND	7.6		

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	I052202-17		I052202-18		I052202-19			
Client Sample I.D.:	1702039-17 / 7-AM		1702039-18 / 7-AM Dup		1702039-19 / 8-3 Dup			
Date/Time Sampled:	5/16/17 12:31		5/16/17 12:31		5/16/17 12:51			
Date/Time Analyzed:	6/1/17 19:40		6/1/17 20:21		5/31/17 4:25			
QC Batch No.:	170601MS2A1		170601MS2A1		170530MS2A1			
Analyst Initials:	DT		DT		DT			
Dilution Factor:	1.7		1.7		1.7			
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3		
1,1,2-Trichloroethane	ND	9.2	ND	9.5	ND	9.2		
Tetrachloroethene	ND	11	ND	12	2,000	11		
2-Hexanone	ND	6.9	ND	7.1	ND	6.9		
Dibromochloromethane	ND	14	ND	15	ND	14		
1,2-Dibromoethane	ND	13	ND	13	ND	13		
Chlorobenzene	ND	7.8	ND	8.0	ND	7.8		
Ethylbenzene	ND	7.3	ND	7.6	ND	7.3		
p,&m-Xylene	ND	7.3	ND	7.6	27	7.3		
o-Xylene	ND	7.3	ND	7.6	11	7.3		
Styrene	ND	7.2	ND	7.4	ND	7.2		
Bromoform	ND	17	ND	18	ND	17		
1,1,2,2-Tetrachloroethane	ND	23	ND	24	ND	23		
Benzyl Chloride	ND	8.7	ND	9.0	ND	8.7		
4-Ethyl Toluene	ND	8.3	ND	8.6	ND	8.3		
1,3,5-Trimethylbenzene	ND	17	ND	17	ND	17		
1,2,4-Trimethylbenzene	ND	17	ND	17	ND	17		
1,3-Dichlorobenzene	ND	10	ND	10	ND	10		
1,4-Dichlorobenzene	ND	10	ND	10	ND	10		
1,2-Dichlorobenzene	ND	10	ND	10	ND	10		
1,2,4-Trichlorobenzene	ND	25	ND	26	ND	25		
Hexachlorobutadiene	ND	18	ND	19	ND	18		
Naphthalene	ND	44	ND	46	ND	44		

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 3/26/18
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	METHOD BLANK		METHOD BLANK		METHOD BLANK			
Client Sample I.D.:	-		-		-			
Date/Time Sampled:	-		-		-			
Date/Time Analyzed:	5/30/17 13:35		5/31/17 13:37		6/1/17 10:17			
QC Batch No.:	170530MS2A1		170531MS2A1		170601MS2A1			
Analyst Initials:	DT		DT		DT			
Dilution Factor:	0.20		0.20		0.20			
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3		
Dichlorodifluoromethane (12)	ND	0.99	ND	0.99	ND	0.99		
Chloromethane	ND	0.83	ND	0.83	ND	0.83		
1,2-Cl-1,1,2,2-F ethane (114)	ND	1.4	ND	1.4	ND	1.4		
Vinyl Chloride	ND	0.51	ND	0.51	ND	0.51		
Bromomethane	ND	0.78	ND	0.78	ND	0.78		
Chloroethane	ND	0.53	ND	0.53	ND	0.53		
Trichlorofluoromethane (11)	ND	1.1	ND	1.1	ND	1.1		
1,1-Dichloroethene	ND	0.79	ND	0.79	ND	0.79		
Carbon Disulfide	ND	3.1	ND	3.1	ND	3.1		
1,1,2-Cl 1,2,2-F ethane (113)	ND	1.5	ND	1.5	ND	1.5		
Acetone	2.9	2.4	ND	2.4	ND	2.4		
Methylene Chloride	ND	0.69	ND	0.69	ND	0.69		
t-1,2-Dichloroethene	ND	0.79	ND	0.79	ND	0.79		
1,1-Dichloroethane	ND	0.81	ND	0.81	ND	0.81		
Vinyl Acetate	ND	3.5	ND	3.5	ND	3.5		
c-1,2-Dichloroethene	ND	0.79	ND	0.79	ND	0.79		
2-Butanone	ND	0.59	ND	0.59	ND	0.59		
t-Butyl Methyl Ether (MTBE)	ND	0.72	ND	0.72	ND	0.72		
Chloroform	ND	0.98	ND	0.98	ND	0.98		
1,1,1-Trichloroethane	ND	1.1	ND	1.1	ND	1.1		
Carbon Tetrachloride	ND	1.3	ND	1.3	ND	1.3		
Benzene	ND	0.64	ND	0.64	ND	0.64		
1,2-Dichloroethane	ND	0.81	ND	0.81	ND	0.81		
Trichloroethene	ND	1.1	ND	1.1	ND	1.1		
1,2-Dichloropropane	ND	0.92	ND	0.92	ND	0.92		
Bromodichloromethane	ND	1.3	ND	1.3	ND	1.3		
c-1,3-Dichloropropene	ND	0.91	ND	0.91	ND	0.91		
4-Methyl-2-Pentanone	ND	0.82	ND	0.82	ND	0.82		
Toluene	ND	0.75	ND	0.75	ND	0.75		
t-1,3-Dichloropropene	ND	0.91	ND	0.91	ND	0.91		

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: ug/m3

EPA Method TO15

Lab No.:	METHOD BLANK		METHOD BLANK		METHOD BLANK			
Client Sample I.D.:	-		-		-			
Date/Time Sampled:	-		-		-			
Date/Time Analyzed:	5/30/17 13:35		5/31/17 13:37		6/1/17 10:17			
QC Batch No.:	170530MS2A1		170531MS2A1		170601MS2A1			
Analyst Initials:	DT		DT		DT			
Dilution Factor:	0.20		0.20		0.20			
ANALYTE	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3	Result ug/m3	RL ug/m3		
1,1,2-Trichloroethane	ND	1.1	ND	1.1	ND	1.1		
Tetrachloroethene	ND	1.4	ND	1.4	ND	1.4		
2-Hexanone	ND	0.82	ND	0.82	ND	0.82		
Dibromochloromethane	ND	1.7	ND	1.7	ND	1.7		
1,2-Dibromoethane	ND	1.5	ND	1.5	ND	1.5		
Chlorobenzene	ND	0.92	ND	0.92	ND	0.92		
Ethylbenzene	ND	0.87	ND	0.87	ND	0.87		
p,&m-Xylene	ND	0.87	ND	0.87	ND	0.87		
o-Xylene	ND	0.87	ND	0.87	ND	0.87		
Styrene	ND	0.85	ND	0.85	ND	0.85		
Bromoform	ND	2.1	ND	2.1	ND	2.1		
1,1,2,2-Tetrachloroethane	ND	2.7	ND	2.7	ND	2.7		
Benzyl Chloride	ND	1.0	ND	1.0	ND	1.0		
4-Ethyl Toluene	ND	0.98	ND	0.98	ND	0.98		
1,3,5-Trimethylbenzene	ND	2.0	ND	2.0	ND	2.0		
1,2,4-Trimethylbenzene	ND	2.0	ND	2.0	ND	2.0		
1,3-Dichlorobenzene	ND	1.2	ND	1.2	ND	1.2		
1,4-Dichlorobenzene	ND	1.2	ND	1.2	ND	1.2		
1,2-Dichlorobenzene	ND	1.2	ND	1.2	ND	1.2		
1,2,4-Trichlorobenzene	ND	3.0	ND	3.0	ND	3.0		
Hexachlorobutadiene	ND	2.1	ND	2.1	ND	2.1		
Naphthalene	ND	5.2	ND	5.2	ND	5.2		

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 3/26/18
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 170530MS2A1

Matrix: Air

EPA Method TO-14/TO-15

Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	5/30/17 13:35		5/30/17 11:13		5/30/17 11:53						
Data File ID:	30MAY007.D		30MAY004.D		30MAY005.D						
Analyst Initials:	DT		DT		DT						
Dilution Factor:	0.2		1.0		1.0			Limits			
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
1,1-Dichloroethene	0.0	10.0	10.3	103	10.0	100	3.3	70	130	30	Pass
Methylene Chloride	0.0	10.0	9.9	99	11.4	114	14.2	70	130	30	Pass
Trichloroethene	0.0	10.0	9.6	96	9.7	97	0.4	70	130	30	Pass
Toluene	0.0	10.0	9.3	93	9.3	93	0.1	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	7.1	71	7.0	70	1.3	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 6/5/17

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 170531MS2A1

Matrix: Air

EPA Method TO-14/TO-15

Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	5/31/17 13:37		5/31/17 7:49		5/31/17 8:29						
Data File ID:	31MAY008.D		31MAY005.D		31MAY006.D						
Analyst Initials:	DT		DT		DT						
Dilution Factor:	0.2		1.0		1.0			Limits			
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
1,1-Dichloroethene	0.0	10.0	10.5	105	10.6	106	1.3	70	130	30	Pass
Methylene Chloride	0.0	10.0	11.4	114	11.1	111	2.9	70	130	30	Pass
Trichloroethene	0.0	10.0	10.1	101	10.3	103	1.8	70	130	30	Pass
Toluene	0.0	10.0	9.7	97	9.9	99	1.9	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	7.4	74	7.4	74	0.2	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 6/5/17

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 170601MS2A1

Matrix: Air

EPA Method TO-14/TO-15

Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	6/1/17 10:17		6/1/17 8:28		6/1/17 9:08						
Data File ID:	01JUN007.D		01JUN005.D		01JUN006.D						
Analyst Initials:	DT		DT		DT						
Dilution Factor:	0.2		1.0		1.0			Limits			
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
1,1-Dichloroethene	0.0	10.0	10.3	103	10.3	103	0.5	70	130	30	Pass
Methylene Chloride	0.0	10.0	11.0	110	11.3	113	2.1	70	130	30	Pass
Trichloroethene	0.0	10.0	10.4	104	10.2	102	1.9	70	130	30	Pass
Toluene	0.0	10.0	10.1	101	10.1	101	0.6	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	7.5	75	7.5	75	0.1	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 6/5/17

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	I052202-01		I052202-02		I052202-03		I052202-04	
Client Sample I.D.:	1702039-01 / 2A-3-15'		1702039-02 / 2A-3-10'		1702039-03 / 2A-3-5'		1702039-04 / 2A-1-15'	
Date/Time Sampled:	5/16/17 10:17		5/16/17 10:27		5/16/17 10:32		5/16/17 10:50	
Date/Time Analyzed:	6/1/17 20:57		6/1/17 21:11		6/1/17 21:26		6/1/17 21:40	
QC Batch No.:	170601GC8A4		170601GC8A4		170601GC8A4		170601GC8A4	
Analyst Initials:	MJ		MJ		MJ		MJ	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Methane	ND	0.0017	ND	0.0017	ND	0.0017	0.0021	0.0017

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 6/5/17
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	I052202-05		I052202-06		I052202-07		I052202-08	
Client Sample I.D.:	1702039-05 / 2A-1-10'		1702039-06 / 2A-1-5'		1702039-07 / 2A-2-15'		1702039-08 / 2A-2-10'	
Date/Time Sampled:	5/16/17 10:51		5/16/17 10:56		5/16/17 11:17		5/16/17 11:17	
Date/Time Analyzed:	6/2/17 7:46		6/2/17 8:17		6/1/17 22:25		6/2/17 8:32	
QC Batch No.:	170601GC8A4		170601GC8A4		170601GC8A4		170601GC8A4	
Analyst Initials:	MJ		MJ		MJ		MJ	
Dilution Factor:	1.7		1.7		1.7		2.4	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Methane	ND	0.0017	ND	0.0017	0.026	0.0017	ND	0.0024

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 6/5/17
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	I052202-09		I052202-10		I052202-13		I052202-14	
Client Sample I.D.:	1702039-09 / 2A-2-5'		1702039-10 / 2A-2-5' Dup		1702039-13 / 7-4-5'		1702039-14 / 7-4-5' Dup	
Date/Time Sampled:	5/16/17 11:12		5/16/17 11:21		5/16/17 12:12		5/16/17 12:24	
Date/Time Analyzed:	6/2/17 8:47		6/1/17 23:09		6/1/17 23:24		6/2/17 6:48	
QC Batch No.:	170601GC8A4		170601GC8A4		170601GC8A4		170601GC8A4	
Analyst Initials:	MJ		MJ		MJ		MJ	
Dilution Factor:	1.7		1.7		1.7		1.7	
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v
Methane	ND	0.0017	0.0030	0.0017	ND	0.0017	ND	0.0017

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 6/5/17
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: Advanced Technology Laboratories
Attn: Rachelle Arada
Project Name: NA
Project No.: 1702039
Date Received: 05/22/17
Matrix: Air
Reporting Units: % v/v

ASTM D1946

Lab No.:	I052202-15		I052202-16		I052202-19			
Client Sample I.D.:	1702039-15 / 7-1-5'		1702039-16 / 7-3-5'		1702039-19 / 8-3 Dup			
Date/Time Sampled:	5/16/17 12:13		5/16/17 12:20		5/16/17 12:51			
Date/Time Analyzed:	6/2/17 7:02		6/2/17 7:17		6/2/17 7:31			
QC Batch No.:	170601GC8A4		170601GC8A4		170601GC8A4			
Analyst Initials:	MJ		MJ		MJ			
Dilution Factor:	1.7		1.7		2.3			
ANALYTE	Result % v/v	RL % v/v	Result % v/v	RL % v/v	Result % v/v	RL % v/v		
Methane	ND	0.0017	ND	0.0017	ND	0.0023		

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: Mark Johnson
Operations Manager

Date 6/5/17

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No: 170601GC8A4
Matrix: Air
Reporting Units: % v/v

ASTM D1946
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK			LCS		LCSD					
Date Analyzed:	6/1/17 20:42			6/1/17 19:58		6/1/17 20:13					
Analyst Initials:	AS			AS		AS					
Dilution Factor:	1.0			1.0		1.0			Limits		
ANALYTE	Result % v/v	RL % v/v	SPIKE AMT. % v/v	Result % v/v	% Rec.	Result % v/v	% Rec.	RPD %	Low %Rec	High %Rec	Max. RPD
Methane	ND	0.0010	0.10	0.106	106	0.105	105	0.7	70	130	30

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 6/5/17
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1702039

I052202-01/19

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachelle Arada (Rachelle@atlglobal.com)
Sampler: DAT

RECEIVING LABORATORY:

Air Technology Laboratories, Inc.
18501 E. Gale Ave, Suite 130
City of Industry, CA 91748
Phone :(626) 964-4032
Fax: (626) 964-5832
PO#: SC11610- STANDARD TAT (RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
01 **ATL Lab#: 1702039-01 / 2A3-15'**		**Air**	**05/16/17 10:17**	**D1946 - METHANE only**
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 10:17		Please include Napthalene with TO-15 analysis.
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 10:17		
02 **ATL Lab#: 1702039-02 / 2A-3-10'**		**Air**	**05/16/17 10:27**	
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 10:27		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 10:27		
03 **ATL Lab#: 1702039-03 / 2A-3-5'**		**Air**	**05/16/17 10:32**	
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 10:32		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 10:32		

Released By	Date	Received By	Date
[signature]	5/22/17	[signature]	5/22/17 1617
Released By	Date	Received By	Date

5/18/17

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1702039

I052202-01/19

Analysis	Due	Expires	Sampled	Comments
04 **ATL Lab#: 1702039-04 / 2A-1-15'**		Air	05/16/17 10:50	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 10:50		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 10:50		
05 **ATL Lab#: 1702039-05 / 2A-1-10'**		Air	05/16/17 10:51	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 10:51		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 10:51		
06 **ATL Lab#: 1702039-06 / 2A-1-5'**		Air	05/16/17 10:56	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 10:56		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 10:56		
07 **ATL Lab#: 1702039-07 / 2A-2-15'**		Air	05/16/17 11:17	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 11:17		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 11:17		
08 **ATL Lab#: 1702039-08 / 2A-2-10'**		Air	05/16/17 11:17	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 11:17		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 11:17		

Released By	Date	Received By	Date
	5/22/17		5/22/17 1617
Released By	Date	Received By	Date

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1702039

I052202-09/19

Analysis	Due	Expires	Sampled	Comments
09 **ATL Lab#: 1702039-09 / 2A-2-5'**		**Air**	**05/16/17 11:12**	
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 11:12		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 11:12		
10 **ATL Lab#: 1702039-10 / 2A-2-5' Dup**		**Air**	**05/16/17 11:21**	
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 11:21		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 11:21		
11 **ATL Lab#: 1702039-11 / 2A-AM**		**Air**	**05/16/17 11:33**	
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 11:33		
12 **ATL Lab#: 1702039-12 / 6-AM**		**Air**	**05/16/17 11:53**	
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 11:53		
13 **ATL Lab#: 1702039-13 / 7-4-5'**		**Air**	**05/16/17 12:12**	
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 12:12		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 12:12		

Released By	Date	Received By	Date
[signature]	5/22/17	[signature]	5/22/17 1617
Released By	Date	Received By	Date

5/16/17

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1702039

I052202-01/19

Analysis	Due	Expires	Sampled	Comments
14 **ATL Lab#: 1702039-14 / 7-4-5' Dup**		Air	05/16/17 12:24	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 12:24		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 12:24		
15 **ATL Lab#: 1702039-15 / 7-1-5'**		Air	05/16/17 12:13	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 12:13		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 12:13		
16 **ATL Lab#: 1702039-16 / 7-3-5'**		Air	05/16/17 12:20	
D1946_C_SUB [Fixed Gases - Oxygen]	06/02/17 17:00	06/15/17 12:20		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 12:20		
17 **ATL Lab#: 1702039-17 / 7-AM**		Air	05/16/17 12:31	
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 12:31		
18 **ATL Lab#: 1702039-18 / 7-AM Dup**		Air	05/16/17 12:31	
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	06/02/17 17:00	06/15/17 12:31		

Released By	Date	Received By	Date
[signature]	5/22/17	Don Tay	5/24/17 1617
Released By	Date	Received By	Date

5/18/17

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1702039

I052202-01/19

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1702039-19 / 8-3 Dup		**Air**	**05/16/17 12:51**	
D1946_C_SUB [Fixed Gases - Oxygen]	**06/02/17 17:00**	06/15/17 12:51		
TO15_C [Volatile Organic Compounds in Air] 1- Canister - 1L	**06/02/17 17:00**	06/15/17 12:51		

Released By	Date	Received By	Date
	5/22/17		5/22/17 1617
Released By	Date	Received By	Date

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only				ATLCOC Ver: 20130715
Method of Transport		Sample Conditions Upon Receipt		
		Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL		1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac		2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP. deg C:		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company: Hushmand & Assoc	Address: 250 GODDARD		Tel: (949) 777-1266
	City: IRVINE	State: CA Zip: 92618	Fax: (949) 777-1276

SEND REPORT TO:	SEND INVOICE TO: ☐ Same as SEND REPORT TO
Attn: Naresh BeNama Email: naresh@haieng.com	Attn: Sam Email:
Company: HAI	Company:
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name: 6th St
Project No.: LAC-17-001
Sampler: DAT
Quote No: E17E51
PO #:
Special Instructions/Comments:

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	METHANE	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	AIR	TAT	Container: #	Container: Type	Container: Material	Preservative	QA/QC	REMARKS
1	1702039-01	2A3-15'	5-16-17	1017								X	X							5	1	T	3	MN		
2	-02	2A-3-10'		10:27								X	X								1	T	3	MN		
3	-03	2A-3-5'		10:32								X	X								1	T	3	MN		
4	-04	2A-1-15'		10:50								X	X								1	T	3	MN		
5	-05	2A-1-10'		10:51								X	X								1	T	3	MN		
6	-06	2A-1-5'		10:56								X	X								1	T	3	MN		
7	-07	2A-2-15'		11:17								X	X								1	T	3	MN		
8	-08	2A-2-10		11:17								X	X								1	T	3	MN		
9	-09	2A-2-5'		11:12								X	X								1	T	3	MN		
10	-10	2A-2-5' Dup		11:21								X	X								1	T	3	MN		

Encircle or Write Requested Analysis

Encircle Sample Matrix

Container: # Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Liter; 6=Teflar; 7=Canister. Material: 1=Glass; 2=Plastic; 3=Metal

Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work – ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples, all samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples. Complimentary storage for forty-five (45) calendar days from receipt of samples, $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/SFLC samples. add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name) Don Torres	Date: 5-16	Time: 1:56	Received by: (Signature and Printed Name) FedEx	Date: 5/16/17	Time: 1356
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport		Sample Conditions Upon Receipt					
		Condition	Y	N	Condition	Y	N
☑ Client	☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx	☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company: | Address: | Tel:
City: | State: | Zip: | Fax:

SEND REPORT TO:
Attn: | Email:
Company:
Address:
City: | State: | Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: | Email:
Company:
Address:
City: | State: | Zip:

PROJECT SAMPLES

Project Name:
Project No.:
Sampler:
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; METHANE

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL; AIR

Container: TAT; # ; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister; Material: 1=Glass; 2=Plastic; 3=Metal; Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample ID / Location	Date	Time	REMARKS
1	702094-11	2 A - Am	5/16	11:33	
2	-12	6 - Am		11:53	
3	-14	7-4-5' DUP		12:24	
4	-13	7-4-5'		12:12	
5	-15	7-1-5'		12:13	
6	-16	7-3-5'		12:20	
7	-17	7-Am		12:31	
8	-18	7-Am Dup		12:31	
9		8-3 - Bad Sample		12:43	Don't Test
10	-19	8-3 Dup		12:51	

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 5:00 PM, are considered received the following business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 100% Surchatge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name | Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Juan Dou Torres	5-16	1:56	[illegible]	5/16/17	1352
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

May 24, 2017

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

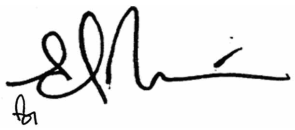
ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1702042
Client Reference : LAC-6th St., LAC-17-001

Enclosed are the results for sample(s) received on May 17, 2017 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
9-1-0.5	1702042-01	Soil	5/17/17 6:57	5/17/17 8:45
9-1-1.0	1702042-02	Soil	5/17/17 6:59	5/17/17 8:45
9-1-3.0	1702042-03	Soil	5/17/17 7:06	5/17/17 8:45
9-1-5.0	1702042-04	Soil	5/17/17 7:10	5/17/17 8:45
9-2-0.5	1702042-05	Soil	5/17/17 7:25	5/17/17 8:45
9-2-1.0	1702042-06	Soil	5/17/17 7:28	5/17/17 8:45
9-3-0.5	1702042-07	Soil	5/17/17 7:33	5/17/17 8:45
9-3-1.0	1702042-08	Soil	5/17/17 7:35	5/17/17 8:45
9-3-3.0	1702042-09	Soil	5/17/17 7:45	5/17/17 8:45
9-3-5.0	1702042-10	Soil	5/17/17 7:50	5/17/17 8:45

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-1-0.5

Lab ID: 1702042-01

Total Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**740**	1.0	1	B7E0731	05/22/2017	05/22/17 16:55	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-1-1.0

Lab ID: 1702042-02

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**94**	1.0	1	B7E0731	05/22/2017	05/22/17 16:56	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-1-3.0

Lab ID: 1702042-03

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**7.1**	1.0	1	B7E0731	05/22/2017	05/22/17 16:57	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-1-5.0

Lab ID: 1702042-04

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.0**	1.0	1	B7E0731	05/22/2017	05/22/17 16:58	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-2-0.5

Lab ID: 1702042-05

Total Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**78**	1.0	1	B7E0731	05/22/2017	05/22/17 16:59	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-2-1.0

Lab ID: 1702042-06

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**630**	1.0	1	B7E0731	05/22/2017	05/22/17 17:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-3-0.5

Lab ID: 1702042-07

Total Metals by ICP-AES EPA 6010B **Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**52**	1.0	1	B7E0731	05/22/2017	05/22/17 17:02	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-3-1.0

Lab ID: 1702042-08

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**29**	1.0	1	B7E0731	05/22/2017	05/22/17 17:06	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-3-3.0

Lab ID: 1702042-09

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.7**	1.0	1	B7E0731	05/22/2017	05/22/17 17:07	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Client Sample ID 9-3-5.0

Lab ID: 1702042-10

Total Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.9**	1.0	1	B7E0731	05/22/2017	05/22/17 17:08	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0731 - EPA 3050B_S										
Blank (B7E0731-BLK1)					Prepared: 5/22/2017 Analyzed: 5/22/2017					
Lead	ND	1.0	0.19							
LCS (B7E0731-BS1)					Prepared: 5/22/2017 Analyzed: 5/22/2017					
Lead	45.4173	1.0	0.19	50.0000		90.8	80 - 120			
Matrix Spike (B7E0731-MS1)			**Source: 1702042-10**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
Lead	95.5626	1.0	0.19	125.000	5.94357	71.7	34 - 129			
Matrix Spike Dup (B7E0731-MSD1)			**Source: 1702042-10**		Prepared: 5/22/2017 Analyzed: 5/22/2017					
Lead	117.139	1.0	0.19	125.000	5.94357	89.0	34 - 129	20.3	20	R

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 05/24/2017

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (V0A)	NA	☐	6. PRESERVED	☐	☑
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other: _____	4. SEALED	☐	☑	NO COOLER		

CUSTOMER

Company: Hushmand & Assoc — Address: — Tel:
City: — State: — Zip: — Fax:

SEND REPORT TO:
Attn: Naresh Bellamkonda — Email:
Company: Hushmand & Assoc
Address: 250 Goddard
City: Irvine — State: — Zip:

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: — Email:
Company:
Address:
City: — State: — Zip:

PROJECT SAMPLES

Project Name: LAC- 6th st.
Project No.: LAC-17-001
Sampler: DAT
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals) — Lead only; TO-15

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

Container: TAT; # ; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister; Material: 1=Glass; 2=Plastic; 3=Metal; Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample ID / Location	Date	Time	8260	8015(GRO)	8015(DRO)	8270	8081	8082	6010/7000	TO-15	SOIL	SOLIDS	WATER-DRINK	WATER-STORM	AQUEOUS	TAT	#	Type	Material	Preservative	REMARKS
1	702042-01	9-1-0.5	5-17	6:57							X							5	1	5	1	NA	Lead only
2	-02	9-1-1.0		6:59							X								1				
3	-03	9-1-3.0		7:06							X								1				
4	-04	9-1-5.0		7:10							X								1				
5	-05	9-2-0.5		7:25							X								1				
6	-06	9-2-1.0		7:28							X								1				
7	-07	9-3-0.5		7:33							X								1				
8	-08	9-3-1.0		7:35							X								1				
9	-09	9-3-3.0		7:45							X								1				
10	-10	9-3-5.0		7:50							X								1				

SUBMITTAL

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Don Torres — Submitter Print Name

Signature

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Don Torres	5-17-17	8:45		5/17/17	08:45
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

June 05, 2017

Naresh Bellana
Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618
Tel: (949) 777-1266
Fax:(949) 777-1276

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1702042

Client Reference : LAC-6th St., LAC-17-001

Enclosed are the results for sample(s) received on May 17, 2017 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
9-1-0.5	1702042-01	Soil	5/17/17 6:57	5/17/17 8:45
9-1-1.0	1702042-02	Soil	5/17/17 6:59	5/17/17 8:45
9-2-0.5	1702042-05	Soil	5/17/17 7:25	5/17/17 8:45
9-2-1.0	1702042-06	Soil	5/17/17 7:28	5/17/17 8:45
9-3-0.5	1702042-07	Soil	5/17/17 7:33	5/17/17 8:45

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 9-1-0.5

Lab ID: 1702042-01

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.42**	0.25	5	B7F0039	06/02/2017	06/02/17 16:47	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**34**	1.0	20	B7F0044	06/02/2017	06/02/17 14:17	D1

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0047	06/02/2017	06/02/17 13:39	D1

pH by EPA 9045C

Analyst: SLO

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.8**	0.10	1	B7E0982	05/31/2017	05/31/17 10:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 9-1-1.0

Lab ID: 1702042-02

TCLP Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:48	D1

STLC Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.2**	1.0	20	B7F0044	06/02/2017	06/02/17 14:18	D1

STLC DI Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0047	06/02/2017	06/02/17 13:40	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 9-2-0.5

Lab ID: 1702042-05

TCLP Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:49	D1

STLC Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.3**	1.0	20	B7F0044	06/02/2017	06/02/17 14:19	D1

STLC DI Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0047	06/02/2017	06/02/17 13:41	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 9-2-1.0

Lab ID: 1702042-06

TCLP Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.5**	0.25	5	B7F0039	06/02/2017	06/02/17 16:51	D1

STLC Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**50**	1.0	20	B7F0044	06/02/2017	06/02/17 14:21	D1

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: GO

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0047	06/02/2017	06/02/17 13:43	D1

pH by EPA 9045C

Analyst: SLO

Analyte	Result (pH Units)	PQL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.6**	0.10	1	B7E0982	05/31/2017	05/31/17 10:00	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Client Sample ID 9-3-0.5

Lab ID: 1702042-07

TCLP Metals by ICP-AES EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.25	5	B7F0039	06/02/2017	06/02/17 16:52	D1

STLC Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.0**	1.0	20	B7F0044	06/02/2017	06/02/17 14:22	D1

STLC DI Metals by ICP-AES by EPA 6010B — **Analyst: GO**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	20	B7F0047	06/02/2017	06/02/17 13:44	D1

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

QUALITY CONTROL SECTION

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0039 - EPA 3010A_S										
Blank (B7F0039-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	0.050	0.0028							
Blank (B7F0039-BLK2)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	0.050	0.0028							
LCS (B7F0039-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	1.01106	0.050	0.0028	1.00000		101	80 - 120			
Duplicate (B7F0039-DUP1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	0.25	0.014		ND			NR	20	
Duplicate (B7F0039-DUP2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	0.25	0.014		ND			NR	20	
Matrix Spike (B7F0039-MS1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	14.7721	0.25	0.014	2.50000	ND	591	78 - 109			M1
Matrix Spike (B7F0039-MS2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	2.45343	0.25	0.014	2.50000	ND	98.1	78 - 109			
Matrix Spike Dup (B7F0039-MSD1)			**Source: 1702036-85**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	2.35424	0.25	0.014	2.50000	ND	94.2	78 - 109	145	20	R

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0044 - STLC_S Extraction										
Blank (B7F0044-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	1.0	0.057							
Blank (B7F0044-BLK2)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	1.0	0.057							
LCS (B7F0044-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	2.01514			2.00000		101	80 - 120			
Duplicate (B7F0044-DUP1)			**Source: 1702036-90**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	6.47783	1.0	0.057		6.40643			1.11	20	
Duplicate (B7F0044-DUP2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	0.914441	1.0	0.057		1.04848			13.7	20	
Matrix Spike (B7F0044-MS1)			**Source: 1702036-90**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	8.22113			2.50000	6.40643	72.6	44 - 130			
Matrix Spike (B7F0044-MS2)			**Source: 1702042-07**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	3.05398			2.50000	1.04848	80.2	44 - 130			
Matrix Spike Dup (B7F0044-MSD1)			**Source: 1702036-90**		Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	8.86890			2.50000	6.40643	98.5	44 - 130	7.58	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7F0047 - STLC DI_S Extraction										
Blank (B7F0047-BLK1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	ND	1.0	0.057							
LCS (B7F0047-BS1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	2.00572			2.00000		100	80 - 120			
LCS Dup (B7F0047-BSD1)					Prepared: 6/2/2017 Analyzed: 6/2/2017					
Lead	2.06095			2.00000		103	80 - 120	2.72	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B7E0982 - Prep_WC1_S										
Duplicate (B7E0982-DUP1)			**Source: 1702070-21**		Prepared: 5/31/2017 Analyzed: 5/31/2017					
pH	7.92000	0.10	0.10		7.81000			1.40	20	

Certificate of Analysis

Hushmand Associates, Inc.	Project Number : LAC-6th St., LAC-17-001
250 Goddard	Report To : Naresh Bellana
Irvine , CA 92618	Reported : 06/05/2017

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Dominic Mata

From: Naresh Bellana [naresh@haieng.com]
Sent: Friday, May 26, 2017 5:10 PM
To: Rachelle Arada
Cc: Dominic Mata; Michael Leonard
Subject: LAC-17-001, Sixth St PARC - Additional Lab Tests

Hi Rachelle & Dominic,

We would like to assign the additional lab tests as per following table. I highlighted the samples which need attention earlier than others in the table.

HAI Sample ID	ATL Sample ID	Required Lab Testing	Notes
1A-1-0.5	1702036-01	STLC Cadmium TCLP Cadmium Hexavalent Chromium STLC Lead TCLP Lead	
1A-1-1.0	1702036-02	STLC Lead TCLP Lead	
1A-1-3.0	1702036-03	Hexavalent Chromium STLC Lead TCLP Lead	
1A-2-0.5	1702036-05	STLC Lead TCLP Lead	
1A-3-0.5	1702036-09	STLC Lead TCLP Lead	
1A-3-1.0	1702036-10	STLC Lead TCLP Lead	
1A-4-0.5	1702036-13	STLC Lead TCLP Lead	
5-1-1.0	1702036-30	STLC Lead TCLP Lead	
5-1-2.0	1702036-31	STLC Lead TCLP Lead	
5-2-3.0	1702036-36	STLC Lead TCLP Lead	
6-2-0.5	1702036-85	STLC Lead TCLP Lead	HIGHER PRIORITY
6-3-1.0	1702036-42	STLC Barium TCLP Barium STLC Cadmium TCLP Cadmium Hexavalent Chromium STLC Copper STLC Lead TCLP Lead STLC Zinc	HIGHER PRIORITY
6-3-3.0	1702036-43	STLC Lead TCLP Lead	HIGHER PRIORITY
6-4-1.0	1702036-46	STLC Arsenic TCLP Arsenic	

		STLC Lead TCLP Lead	
6-5-0.5	1702036-49	STLC Cadmium TCLP Cadmium Hexavalent Chromium STLC Lead TCLP Lead	
6-5-1.0	1702036-50	STLC Lead TCLP Lead	
6-8-1.0	1702036-81	STLC Lead TCLP Lead	
6-8-7.5	1702036-84	STLC Mercury TCLP Mercury	
6-9-3.0	1702036-62	STLC Antimony STLC Copper STLC Lead TCLP Lead	
6-10-1.0	1702036-65	STLC Lead TCLP Lead	
6-10-3.0	1702036-66	STLC Cadmium TCLP Cadmium STLC Lead TCLP Lead	
7-1-0.5	1702036-89	STLC Copper	
7-1-1.0	1702036-90	STLC Copper STLC Lead	
7-3-0.5	1702036-73	STLC Lead	
7-4-0.5	1702036-77	STLC Lead	
8-1-0.5	1702036-AD	STLC Copper STLC Lead	
8-1-1.0	1702036-AE	STLC Copper STLC Lead	
8-3-3.0	1702036-AN	STLC Cadmium TCLP Cadmium STLC Lead	
8-3-5.0	1702036-AO	Hexavalent Chromium	
9-1-0.5	1702042-01	STLC Lead DI-WET Lead TCLP Lead pH	
9-1-1.0	1702042-02	STLC Lead DI-WET Lead TCLP Lead	
9-2-0.5	1702042-05	STLC Lead DI-WET Lead TCLP Lead	
9-2-1.0	1702042-06	STLC Lead DI-WET Lead TCLP Lead pH	
9-3-0.5	1702042-07	STLC Lead DI-WET Lead	

		TCLP Lead	

Please let us know if you have any questions.

Thanking you,

Sincerely,

Naresh Bellana, MS, PE
Senior Staff Engineer

Hushmand Associates, Inc.
250 Goddard
Irvine, CA 92618

p. (949) 777-1266
d. (949) 777-1275
f. (949) 777-1276

25 Years of Service Excellence

APPENDIX D
CALTRANS AND DTSC
ADL AGREEMENT

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: Aerially Deposited Lead Contaminated Soils in State Highway Rights-of-Way Project Proponent: California Department of Transportation Division of Environmental Analysis P.O. Box 94284, MS-27 Sacramento, California 94723-0001	Docket No. ESPO-SMA 15/16-001 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils Health and Safety Code Section 25187(b)(5)

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) enters into this Soil Management for Aerially Deposited Lead-Contaminated Soils Agreement (Agreement) with the California Department of Transportation (Caltrans).

1.2 Jurisdiction. This Agreement is entered into by DTSC and Caltrans pursuant to Health and Safety Code (H&SC) section 25187(b)(5), as Caltrans may generate ADL-contaminated soil in the course of future activities for State highway projects.

1.3 Purpose. This Agreement applies to the future management of aerially deposited lead (ADL)-contaminated soil generated by Caltrans in the course of State highway projects, in all Caltrans districts, statewide. The future management activities to which this Agreement generally applies are the stockpiling, disposal, tracking, transportation and final placement of ADL-contaminated soil. Subject to Section 3.23, this Agreement is not a corrective action order based on Caltrans' past ADL-contaminated soil management practices.

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II.BACKGROUND

2.1 History. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance by reducing engine 'knock' and allowing higher engine compression. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in ADL being deposited in and along roadways throughout the State. The phasedown of lead in gasoline began in 1974 when, under the authority of the Clean Air Act Amendments of 1970, the U.S. Environmental Protection Agency (EPA) introduced rules requiring the use of unleaded gasoline in new cars equipped with catalytic converters. The introduction of catalytic converters for control of hydrocarbon (HC), nitrous oxide (NOx) and carbon monoxide (CO) emissions required that motorists use unleaded gasoline because lead destroys the emissions control capacity of catalytic converters. By the early1980s gasoline lead levels had declined about 80% as a result of both the regulations and fleet turnover. Beginning in 1992, lead was banned as a fuel additive in California.

ADL-contaminated soil still exists along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. The highest lead concentrations are usually found within 10 feet of the edge of the pavement and within the top six inches of the soil. In some cases, lead is as deep as two to three feet below the surface and can extend 20 feet or more from the edge of pavement. Transportation of such soil to hazardous waste landfills challenges the State's limited hazardous waste landfill capacity and increases air pollution due to trucking. The alternative of transporting the soil out of state for disposal is State-resource-intensive, and contrary to Caltrans policy. Caltrans, by managing the soil in accordance with this Agreement, would be reducing hazards, preserving landfill capacity, and reducing the air quality impacts inherent in transporting the soil many miles to landfills, while still protecting human health and the environment.

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Various lines of evidence indicate the potential for lead leaching into groundwater is low. Most important are soil data collected from actual sites in California where Caltrans has conducted construction operations. Measurements of Partitioning Coefficients (Kd) from 595 ADL-contaminated soil samples indicate that lead, while prevalent, is so tightly bound to the soil that it does not pose a serious threat of leaching into the groundwater. The calculated mean Kd of 333 liters per kilogram (L/kg) from northern California soils was the lowest of the groups in the dataset but is still far above the recognized threshold of Kd = 20 for chemicals that are considered immobile and not a threat of leaching to groundwater. However, for soil having pH less than 5; the solubility of lead increases greatly.

Surface water is protected through implementation of Caltrans Stormwater Management Plan (SWMP) which addresses stormwater pollution control related to Caltrans activities, including planning, design, construction, maintenance, and operation of roadways and facilities as required in the Caltrans Statewide Storm Water Permit (State Water Resources Control Board Order 2012-0011-DWQ, as amended by Orders WQ 2014-0006-EXEC, WQ 2014-0077-DWQ & WQ 2015-0036-EXEC). Caltrans submitted a proposed SWMP on November 23, 2015, which must be approved by the State Water Resources Control Board, and as specified in the Permit approved terms of the SWMP are fully enforceable by the State Water Board and nine Regional Water Boards. Surface water is afforded additional protections if there are potential impacts from projects that fall under the jurisdiction of the Coastal Commission (or designees) and/or the California Department of Fish and Wildlife (DFW). Caltrans has partnering agreements with these agencies and they are engaged early in the transportation project development process. The Coastal Commission is a Certified Regulatory Program under CEQA and DFW is a trustee agency under CEQA. As regulatory agencies, both are required under CEQA to review projects within their jurisdiction. Whenever a transportation project is proposed within the California Coastal Zone, the California Coastal Act (Section 30600) states that any activity meeting the definition of

development requires a coastal development permit or verification of an exemption or waiver. Sections 30230 - 30232 of the act specifically address water quality and water quality protection requirements may be added to permits. Whenever a project is proposed within the jurisdiction of the DFW, Caltrans coordinates with DFW on project development pursuant to Sections 1600, 2050, and 2081 of the Fish and Game Code. Section 1600 of the Fish and Game Code regulates impacts to lakes and streambeds. Sections 2050 and 2081 (California Endangered Species Act) regulate impacts to endangered species. Caltrans coordinates with DFW throughout the project delivery process to identify impacts to areas within their jurisdiction and address those impacts. Caltrans standard practice on all projects is to protect water quality by incorporating permanent stormwater pollution prevention Best Management Practices (BMPs) in highway drainage design. These site specific permanent BMPs, which are appropriate for the flow rates, prevent erosion and any associated discharge of pollutants.

2.2 Previous Actions Taken.

In 1995, pursuant to Health and Safety Code 25143, DTSC granted certain Caltrans' districts a Variance from the hazardous waste management requirements to obtain a permit for a disposal facility and any other generator requirements that concern the transportation, manifesting, storage and land disposal of hazardous waste for aerially deposited lead-contaminated soils, as defined in the Variance (Variance). The Variance substituted alternative management standards which allowed Caltrans road construction projects to reuse ADL-contaminated soils with hazardous waste levels of lead on project sites while maintaining protection of human health and the environment. Although the level of lead found in some areas is higher than that which is considered to be hazardous waste, it was determined that Caltrans could reuse the soil along the freeways and roads under construction without posing an unacceptable risk to human health or the environment. Keeping these soils in defined areas in which people spend little, if any, time prevents contact with the lead.

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In addition, Caltrans incorporated specifications in its contracts with construction contractors that require contractors to handle hazardous waste level ADL-contaminated soils consistent with the requirements of the Variance. For example, soil found to contain hazardous waste levels of lead is to be kept separate from non-hazardous soil and the contractor takes dust control and security measures to keep people from coming into contact with the soil until it is reused. The hazardous waste level ADL-contaminated soil would stay in place (beneath the road, highway, freeways, or a layer of clean soil, etc.) for the life of the highway. Additional upgrades and widening are much more likely than abandoning old highways. Therefore, the hazardous waste level ADL-contaminated soil would remain secure, and human health and the environment would remain protected long term.

DTSC has issued new variances incorporating additional and more protective provisions approximately every five years since the first Variance in 1995. Additional Caltrans' districts were also added over time. The current Variance includes all Caltrans' districts and has been in effect since 2009. In June 2015, DTSC made the decision to transition from a Variance to this Agreement. This Agreement is intended to control Caltrans future activities to manage ADL contaminated soil. Subject to 3.23, this Agreement is not a corrective action order based on any specific incidents of Caltrans past ADL-contaminated soil management. Existing projects that have implemented the Variance and have completed the Project Approval and Environmental Document milestone prior to July 1, 2016 shall continue to meet all requirements of the Variance set forth in the Transition Plan.

III. AGREEMENT

3.0 IT IS HEREBY AGREED THAT DTSC shall provide oversight of the activities conducted by Caltrans related to soils containing elevated concentrations of aerially deposited lead from car exhaust in State owned highway rights-of-way. Caltrans shall conduct the activities in the manner specified herein. All work, as appropriate, shall be performed consistent with Health and Safety Code, section 25100

et seq., as amended; the National Contingency Plan (40 Code of Federal Regulations (CFR)) Part 300, as amended; DTSC and U.S. EPA RCRA and Superfund guidance documents regarding site investigation and soil management.

3.1 Definitions

3.1.1 **ADL-Contaminated Soil.** For purposes of this Agreement, ADL-contaminated soil is defined as excavated soil whose only constituent of concern that poses an unacceptable risk to human health or the environment is lead, primarily from exhaust emissions from the operation of motor vehicles, in concentrations greater than considered appropriate for unrestricted use by DTSC (currently 80 milligrams per kilogram [mg/kg] total lead based on a 95 percent upper confidence limit [UCL]) and/or 5 mg/l extractable lead based on a 95 percent UCL, as determined by the CA Waste Extraction Test (CA-WET).

3.1.2 **Clean Soil.** For purposes of this agreement, clean soil is defined as soil not containing total lead over 80 mg/kg based on a 95 percent UCL or soluble lead over 5 mg/l based on a 95 percent UCL as determined by the CA-WET and not containing other constituents at levels that would pose an unacceptable risk to human health or the environment or be unacceptable to the Regional Water Quality Control Board with jurisdiction.

3.1.3 **Project Defined Construction Corridor**. For purposes of this agreement, project defined construction corridor is defined as a specified route restricted to the State highway system that connects a Caltrans project where ADL-contaminated soil is excavated to another Caltrans project that accepts the ADL-contaminated soil for reuse. Project defined construction corridors shall be identified in the Project Notification, if determined at the time of submittal, or in the Start of Construction Notification. A project defined construction corridor shall not exceed 150 miles unless DTSC provides prior approval. DTSC shall respond to a corridor evaluation request within 5 days of submittal.

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3.1.4 **Shelved.** For purposes of this agreement, a project is considered shelved when funding is not available for the project to proceed and the project has to be put on hold.

3.2 Scope of Work and DTSC Oversight. This Agreement applies to the management of ADL-contaminated soil excavated from or imported to the State highway system in the course of highway projects, in all Caltrans districts statewide. The management activities to which this Agreement applies are the stockpiling, disposal, tracking, transportation and final placement of ADL-contaminated soil. The ADL-contaminated soil management procedures defined in this Agreement may also be used by Caltrans on joint projects between Caltrans and local government entities, provided it is only used within State-owned highway rights-of-way and Caltrans performs quality assurance and oversight of all phases of the project including environmental assessment, design, contracting, and construction, as well as operation, and maintenance of the project segments within Caltrans' right-of-way. For such joint projects, Caltrans and the local government entity shall each retain joint and severable liability for any noncompliance with the provisions of this Agreement. DTSC shall provide oversight of response activities related to ADL-contaminated soil.

3.3 Additional Activities. Additional activities may be conducted and DTSC oversight provided by amendment to this Agreement or Exhibits hereto in accordance with Paragraph 3.15.

3.4 Agreement Managers. Daniel Ward, P.E., Chief, Engineering and Special Projects Office, is designated by DTSC as its Manager for this Agreement. Shaila Chowdhury, P.E., Chief, Hazardous Waste, Air, Noise and Paleontology Office, is assigned by Caltrans as Manager for this Agreement. Each Party to this Agreement shall provide at least ten (10) days advance written notice to the other of any change in its designated manager.

3.5 Notices and Submittals. All notices, documents and communications required to be given under this Agreement, unless otherwise specified herein, shall be

sent to the respective parties at the following addresses in a manner that produces a record of the sending of the notice, document or communication such as certified mail, overnight delivery service, facsimile transmission, electronic mail, or courier hand delivery service:

3.5.1 To DTSC:
Perry Myers, P.E., Project Manager
Department of Toxic Substances Control
Engineering and Special Projects Office
8800 Cal Center Drive
Sacramento, California 95826
ADL@dtsc.ca.gov

3.5.2 To Caltrans:
Kim Christmann, Senior Engineering Geologist (Agreement Coordinator)
California Department of Transportation
Division of Environmental Analysis
PO Box 942874, MS27
Sacramento, California 94271-0001
ADL@dot.ca.gov

3.6 Communications. All of DTSC's approvals and decisions, when required, made regarding submittals and notifications shall be communicated to Caltrans in writing by DTSC's Agreement Manager or his/her designee. No informal advice, guidance, plans, specifications, schedules or any other writings by DTSC shall be constructed to relieve Caltrans of the obligation to obtain such written approvals.

3.7 Endangerment During Implementation. In the event DTSC determines that any activity within their jurisdiction (whether or not pursued in compliance with this Agreement) may pose an imminent or substantial endangerment to public health or to the environment, DTSC may order Caltrans to stop further implementation for such period of time as may be needed to abate the endangerment.

3.8 Payment. Reimbursement for DTSC's costs related to this agreement, not to exceed $150,000 annually (comprised of no more than 1760 hours plus contract support costs) shall be made through the existing interagency agreement (identified as Caltrans 43A0310 and DTSC 12-T0106) and its successors.

3.9 **Coordinators**. Caltrans shall designate an Agreement Coordinator, with expertise in hazardous waste and hazardous substance handling/management to establish policies and procedures consistent with this Agreement. Additionally, Caltrans shall designate at least one District Coordinator for each Caltrans district in the State. These District Coordinators shall be the primary point of contact for information flowing to or received from DTSC, regarding any matter or submission under this Agreement. Caltrans shall submit the names and addresses of the Coordinators to DTSC. Caltrans shall promptly notify DTSC of any change in the identity of the Coordinators.

3.10 **Access.** After scheduling access with the Caltrans project Resident Engineer, Caltrans shall provide DTSC's employees, and its authorized representatives, access to individual project areas to which access is necessary to implement this Agreement. Such access shall be subject to the Caltrans project Resident Engineer's safety requirements. Nothing in this paragraph is intended or shall be construed to limit in any way the right of entry or inspections that DTSC or any other agency may otherwise have by operation of any law. After scheduling access with the Caltrans project Resident Engineer 24 hours prior to arrival, DTSC's employees and its authorized representatives shall have the authority to enter, and move freely about all property associated with a project area in accordance with the Caltrans project Resident Engineer's safety requirements at all reasonable times for purposes including, but not limited to: inspecting records, operations logs, sampling and analytic data, and contracts relating to activities under this Agreement; reviewing the progress of Caltrans in carrying out the terms of this Agreement; conducting such tests as DTSC may deem necessary; and verifying the data submitted to DTSC by Caltrans.

3.11 **Sampling and Analysis.** Caltrans shall submit to DTSC a sampling and analysis summary that describes sampling activities and analytical methods typically used to characterize potential contamination at highway projects within 60 days of the Effective Date of the Agreement.

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3.12 Sampling, Data and Document Availability. When requested by DTSC, Caltrans shall make available to DTSC and shall provide copies of, all data and information concerning ADL contamination on a project job site, including technical records, ADL sampling and monitoring information and photographs and maps, whether or not such data and information was developed pursuant to this Agreement.

3.13 Notification of Environmental Conditions. Caltrans shall notify DTSC's Agreement Manager immediately upon learning of any condition posing a significant threat to human health or the environment pertaining to ADL-contaminated soil. Within seven (7) days of the onset of such a condition, Caltrans shall furnish a report to DTSC, signed by the Caltrans' Agreement Manager, setting forth the events which occurred and the measures taken in the response thereto.

3.14 Preservation of Documentation. Caltrans shall maintain a repository of the data, reports, and other documents prepared pursuant to Section 4 of this Agreement. All such data, reports and other documents shall be preserved by Caltrans for a minimum of six (6) years after the conclusion of all activities carried out under this Agreement. If DTSC requests that some or all these documents be preserved for a longer period to time, Caltrans shall either comply with that request, deliver the documents to DTSC, or permit DTSC to copy the documents prior to destruction. Caltrans shall notify DTSC in writing at least ninety (90) days prior to the expiration of the six-year minimum retention period before destroying any documents prepared pursuant to this Agreement. If any litigation, claim, negotiation, audit or other actions involving the records have been started before the expiration of the six-year period, the related records shall be retained until the completion and resolution of all issues arising therefrom or until the end of the six-year period, whichever is later.

3.15 Amendments. This Agreement may be amended or modified solely upon written consent of all parties. Such amendments or modifications may be proposed by either party and shall be effective the third business day following the day

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the last party signing the amendment or modification sends its notification of signing to the other party. The parties may agree to a different effective date. The Parties shall review the Agreement every five (5) years for the purpose of determining whether amendments are warranted.

3.16 Integration. This Agreement constitutes the entire Agreement between the parties and may not be amended, supplemented, or modified, except as provided in this Agreement.

3.17 California Environmental Quality Act (CEQA). Consistent with the California Environmental Quality Act, DTSC shall prepare any necessary CEQA documents related to this Agreement. If required, Caltrans shall submit the information necessary for DTSC to prepare these documents. As required by law, Caltrans will ensure that each individual highway project will comply with CEQA, on a project specific basis. Caltrans will consider the reuse of ADL-contaminated soil during the project-specific CEQA process.

3.18 Dispute Resolution. The Parties agree that the procedures contained in this Section are the required informal administrative procedures for resolving disputes arising under this Agreement. If Caltrans fails to follow the procedures contained in this section, it shall have waived its right to further contest the disputed issue. Parties shall follow sections 3.18.1 through and including 3.18.2 to resolve disputes other than billing and cost recovery issues.

3.18.1 The Parties agree in the first instance to attempt to resolve informally, among the DTSC Project Manager and Caltrans Agreement Coordinator, any disagreement as to Caltrans' compliance with the requirements of this Agreement. The DTSC Project Manager shall memorialize the decision and rationale resulting from these discussions (Initial Informal Administrative Decision) and provide it to Caltrans.

3.18.2 If Caltrans disagrees with the Initial Informal Administrative Decision, it may seek a second level of review. The second level reviewers shall be a DTSC Cleanup Program Division Chief and the Caltrans Environmental Analysis Division

Chief, or their designee(s). Within thirty (30) days of the Initial Informal Administrative Decision Caltrans shall provide to these second level reviewers a written notice stating the reasons why the Initial Informal Administrative Decision is not acceptable and the remedy sought. The notice shall include (a) Caltrans original statement of dispute, (b) supporting documents, including the Initial Informal Administrative Decision, and (c) copies of any responses prepared by the DTSC Project Manager**.** These reviewers shall consider the issues raised in Caltrans' notice, and DTSC shall render a written decision to Caltrans within thirty (30) days of receipt of Caltrans written dispute notice. The Parties may meet and confer prior to the written decision and may mutually agree to extend the days for resolution of the dispute. The decision shall constitute DTSC's Final Informal Administrative Decision on the issues in dispute. Caltrans reserves its legal rights to contest or defend against any final informal administrative decision rendered by DTSC under this section. DTSC reserves its rights as set forth throughout this Agreement. If either party contests the Final Informal Administrative Decision they may elevate the dispute to their respective agency.

3.19 Additional Enforcement Actions. By agreeing to this Agreement, DTSC does not waive the right to take further enforcement actions, except to the extent provided in this Agreement.

3.20 Penalties for Noncompliance. Failure to comply with the terms of this Agreement may subject Caltrans, its local governmental entity partners and its contractors to civil penalties and/or punitive damages for any costs incurred by DTSC or other government agencies as a result of such failure, as provided by applicable provisions of law.

3.21 Exhibits. All exhibits attached to this Agreement are incorporated herein by this reference.

3.22 Time-Periods. Unless otherwise specified, time periods begin from the date this Agreement is fully executed, and "days" means calendar days. "Business days" means all calendar days that are not weekends or official State Holidays.

3.23 Caltrans Liabilities. Nothing in this Agreement shall constitute or be considered a satisfaction or release from liability for any condition or claim arising as a result of Caltrans' past, current, or future operations. Nothing in this Agreement is intended or shall be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from the rights-of-way, except to the extent provided in this Agreement as related to ADL-contaminated soil.

3.24 DTSC Liabilities. DTSC shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by Caltrans or by related parties in carrying out activities pursuant to this Agreement, nor shall DTSC be held as a party to any contract entered into by Caltrans or its agents in carrying out the activities pursuant to this Agreement.

3.25 Third Party Actions. In the event that Caltrans is a party to any suit or claim for damages or contribution relating to work done under this Agreement to which DTSC is not a party, Caltrans shall notify DTSC in writing within ten (10) days after service of the complaint in the third-party. Caltrans shall pay all costs incurred by DTSC relating to such third-party actions, including but not limited to responding to subpoenas.

3.26 Reservation of Rights. Nothing in this Agreement is intended or shall be construed to limit or preclude DTSC from taking any action authorized by law or equity to protect human health or the environment and recovering the cost thereof.

3.26.1 By entering into this Agreement, Caltrans does not admit to any fact, fault, or liability under any statue or regulation.

3.27 Compliance with Applicable Laws. Nothing in this Agreement shall relieve Caltrans from complying with all other applicable laws and regulations, and Caltrans shall conform all actions required by this Agreement with all applicable federal, state and local laws and regulations.

3.28 California Law. This Agreement shall be governed, performed and interpreted under the laws under the State of California.

3.29 **Severability.** If any portion of this Agreement is ultimately determined not to be enforceable, that portion shall be severed from the Agreement and the severability shall not affect the enforceability of the remaining terms of the Agreement.

3.30 **Parties Bound.** This Agreement applies to and is binding upon Caltrans and any successor agency of the State of California, and upon DTSC and any successor agency of the State of California that may have responsibility for and jurisdiction over the subject matter of this Agreement.

3.31 **Effective Date.** The effective date of this Agreement is the date when this Agreement is fully executed.

3.32 **Representative Authority.** Each undersigned representative of the parties to this Agreement certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the parties to this Agreement.

3.33 **Counterparts.** This Agreement may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

IV. REQUIREMENTS FOR MANAGING ADL-CONTAMINATED SOILS

4.0 All ADL-contaminated soil excavated or imported during construction activities shall be managed consistent with this Agreement to ensure there is not an unacceptable risk to human health or the environment. ADL-contaminated soil shall be managed by Caltrans, its local government entity partners and its contractors according to this section. Decisions regarding the handling of ADL-contaminated soil will be based on a 95 percent UCL in cases where this information is available. If this type of data analysis has not been performed it will be based on the maximum lead value detected.

4.1 **General Requirements.** General requirements for all highway projects operating under this Agreement:

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4.1.1 For all ADL-contaminated soil handling activities conducted under this Agreement, Caltrans and its contractors shall comply with all applicable federal, State and local laws, including but not limited to requirements of the State Water Resources Control Board (SWRCB) and California Regional Water Quality Control Boards (RWQCBs), water quality control plans and waste discharge requirements (including storm water permits), requirements for ADL-contaminated soil in Coastal Zone Permits issued by the Coastal Commission or its designees, requirements for ADL-contaminated soil in DFW permits, and requirements of the appropriate Air Quality Management District (AQMD) and/or Air Pollution Control District (APCD). If non-compliance with the requirements of any of these agencies related to the management of ADL-contaminated soil results in non-compliance with this Agreement, it may result in an enforcement action by DTSC. Any ADL-contaminated soil exceeding hazardous waste concentrations that, for any reason, is moved outside of the original project limits or the project defined construction corridor (in the case of ADL-contaminated soil moved from one Caltrans project to another) is not covered by this Agreement and is fully subject to the hazardous waste management standards of Health and Safety Code, chapter 6.5 (section 25100, et seq) and regulations adopted thereunder.

4.1.2 Any highway project operating under this Agreement shall comply with all provisions of any California Environmental Quality Act (CEQA) documents prepared by DTSC for this Agreement, and with any additional requirements imposed by any project-specific CEQA study prepared by another government or private entity. Reuse of ADL-contaminated soil will be evaluated during the project-specific CEQA process.

4.1.3 For each project that has the potential to excavate ADL-contaminated soil, Caltrans shall conduct sampling and analysis to adequately characterize the soils containing aerially deposited lead in the areas of planned excavation along the project route.

4.1.4 Caltrans shall, pursuant to California Code of Regulations, title 22, section 66262.11, perform hazardous waste characterization of any soil to be disposed

of at a landfill under this Agreement. All sampling and analysis must be conducted in accordance with the appropriate methods specified in U.S. EPA SW-846.

4.1.5 ADL-contaminated soils with any of the following characteristics may not be managed under this Agreement and must be properly disposed of:

4.1.5.1 Soils that are RCRA hazardous waste, including but not limited to soils exceeding the RCRA hazardous waste threshold for lead according to the Toxicity Characteristic Leaching Procedure (TCLP), USEPA Method 1311.

4.1.5.2 Soils that are non-RCRA hazardous waste, except soils whose sole hazardous constituent posing an unacceptable risk to human health or the environment is lead in concentrations not exceeding 3,200 mg/kg of total lead and not exceeding 150 mg/l of extractable lead based on a modified waste extraction test using deionized water as the extractant (DI WET).

4.1.5.3 Soil having a pH less than or equal to 5.0.

4.1.6 Caltrans shall ensure that no hazardous waste, for constituents other than lead, is placed in areas where ADL-contaminated soil is stockpiled or buried in accordance with this Agreement.

4.1.7 ADL-contaminated soil excavated under the authority of this Agreement shall not be stockpiled or buried outside of the project-defined construction corridor from where the soil was excavated, except as provided in section 4.1.7.1. Caltrans may move ADL-contaminated soil from one Caltrans project to another Caltrans project for purposes of stockpiling, placement, or burial only if the soil remains within the project-defined construction corridor except that ADL-contaminated soil shall not be moved from one project to another project and placed on a roadway within the State right-of-way whose original road construction occurred after January 1, 1996, when lead was banned from gasoline nationwide.

4.1.7.1 Soils with concentrations of total lead greater than 80 mg/kg (but not exceeding 320 mg/kg) and extractable lead less than 5 mg/l, as determined by the CA-WET, may be removed from the State highway right of way without disposal in a landfill if they are managed in accordance with section 4.6.

4.1.8 Caltrans shall implement appropriate health and safety procedures to protect its employees and the public, and to prevent or minimize exposure to lead. A project-specific lead compliance plan shall be prepared and implemented. The monitoring and exposure standards for workers shall be based on construction standards for exposure to lead in California Code of Regulations, title 8, section 1532.1.

4.1.9 During all handling of ADL-contaminated soil, including its initial excavation from roadsides, subsequent loading and unloading onto and from vehicles, and all handling related to stockpiling or burial, Caltrans shall implement fugitive dust control measures using water or other palliatives. Caltrans must comply with any additional dust control requirements imposed by the local AQMD or Air Pollution Control District (APCD).

4.1.10 If visible dust migration beyond the project limits occurs during any activity authorized by this Agreement, whether initial excavation, truck loading/unloading, transportation, stockpiling or burying of the soil, the activity must be stopped until remedial actions are taken, or other conditions change, which enable resumption of the activity without dust migration.

4.1.11 ADL-contaminated soil shall not be placed in or covered by soils with a pH less than 5.0.

4.2 Transportation of ADL-Contaminated Soils. In transporting ADL-contaminated soil on a highway open to the public within the project-defined construction corridor and to other locations pursuant to this Agreement, the following sections of California Code of Regulations, title 22, division 4.5, chapter 13 shall be followed:

4.2.1 Section 66263.16, which requires each vehicle and container used to transport hazardous waste to be designed and constructed, and its contents so limited, as to prevent release of hazardous waste to the environment, and to be free from leaks and all discharge openings securely closed during transportation;

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4.2.2 Section 66263.23, which requires transporters of hazardous waste to use a covered container to transport hazardous wastes that are subject to dispersal by wind;

4.2.3 Sections 66263.30 and 66263.31 which require the transporter, in the case of release of hazardous waste during transportation, to take immediate action to protect human health and the environment including notifying local authorities.

4.3 Stockpiling of ADL-Contaminated Soil Within the State Right-of-Way.

4.3.1 Excavated ADL-contaminated soil designated for burial not placed into the designated burial area by the end of the working day shall be stockpiled on sheets of polyethylene or geomembrane and covered with either sheets of polyethylene or at least one foot of clean soil. The excavated ADL-contaminated soil shall be protected from contacting surface water and from being dislodged or transported by wind or storm water in such a manner that no ADL-contaminated soil is transported beyond the limits of the stockpile while the ADL-contaminated soils are stockpiled. The covers shall be inspected at least once a week and within 24 hours after rainstorms. If the ADL-contaminated soil is stockpiled for more than 4 days from the time of excavation, Caltrans shall restrict public access to the stockpile by using barriers that meet the safety requirements of the construction zone.

4.3.2 Caltrans shall stockpile ADL-contaminated soil only on high ground (i.e. no sump areas or low points) so that stockpiled soil shall not come in contact with surface water run-on or run-off.

4.3.3 Caltrans shall not stockpile ADL-contaminated soil in environmentally or ecologically sensitive areas.

4.4 Placement of Surface Soils Within the State Right-of-Way. ADL-contaminated soil with a concentration of extractable lead not exceeding 5 mg/l, as determined by the CA-WET, and total lead not exceeding 320 mg/kg may be placed without cover. The 320 mg/kg limit is protective of adult workers, including pregnant

women. These soils shall not be placed in areas routinely used by the public (e.g. rest stops). Placement of these soils shall also comply with any requirements specified by the California Regional Water Quality Control Board and other agencies, such as the California Coastal Commission and the DFW, with responsibility for and jurisdiction over the area where the project is located.

4.5 Burial Within State Right-of-Way. ADL-contaminated soil containing lead exceeding 5 mg/L, as determined by the CA-WET, or 320 mg/kg total lead may be reused but shall be buried within the State right-of-way consistent with the following provisions. Placement of these soils shall also comply with any requirements specified by the California Regional Water Quality Control Board with responsibility for the area where the project is located.

4.5.1 ADL-contaminated soil shall be buried at least five (5) feet above the maximum historical water table elevation.

4.5.2 ADL-contaminated soil shall not be buried in locations that may require maintenance activities resulting in soil disturbance. ADL-contaminated soil shall not be buried within ten (10) feet of inlets and outlets of drainage unit/systems, such as culverts, in areas to be used for earthen-based stormwater structural treatment facilities, or in Ecologically Sensitive Habitat Areas (ESHA) as defined by the California Coastal Commission, unless it is demonstrated that doing so will not create unacceptable impacts to water quality.

4.5.3 Buried ADL-contaminated soil shall be adequately covered to prevent erosion and reduce water infiltration, in compliance with the following standards, which are also depicted in Table 1:

1. Soil exceeding 5 mg/L, as determined by the CA-WET, or exceeding 320 mg/kg total lead shall be covered by a minimum of one (1) foot of clean soil or a pavement structure, as long as the DI WET concentration does not exceed 1.5 mg/l and total lead does not exceed 1600 mg/kg. In vegetated areas the soil cover must be thick enough to preclude disturbance by planned plant establishment and irrigation system installation and maintenance.
2. Soil with a concentration of extractable lead by DI-WET exceeding 1.5 mg/l or a concentration of total lead exceeding 1600 mg/kg shall be

covered by a pavement structure, as long as the DI-WET concentration does not exceed 150 mg/l and total lead does not exceed 3200 mg/kg.

3. Soil with a concentration of extractable lead by DI-WET exceeding 150 mg/l or a concentration of total lead exceeding 3200 mg/kg total lead is not eligible for management under this Agreement and is subject to full regulation as hazardous waste.

Table 1. Minimum Cover Requirements for ADL-contaminated Soil Based on Extractable and Total Lead Concentrations (95% UCL)*

Extractable Lead Concentration		Total Lead Concentration	Minimum Cover Requirement
Less than 5 mg/l CA-WET	and	Less than 320 mg/kg	No cover requirement
Greater than 5 mg/l CA-WET and equal to or below 1.5 mg/l DI-WET	or	Greater than 320 mg/kg but equal to or below 1600 mg/kg	One foot of clean soil**
Greater than 1.5 mg/l DI-WET but equal to or below 150 mg/l DI-WET	or	Greater than 1600 mg/kg but equal to or below 3200 mg/kg	Pavement structure
Greater than 150 mg/l DI-WET	or	Greater than 3200 mg/kg	Subject to full regulation as hazardous waste

**** ADL-contaminated soil having a pH less than or equal to 5.0 may not be managed under this Agreement and must be properly disposed of.***

******* *This is the minimum requirement. Such soil may alternatively be covered by a pavement structure.*

4.5.4 ADL-contaminated soil shall be buried and covered in a manner that shall prevent accidental breach of the covering soil or pavement. ADL-contaminated soil shall only be placed in locations that are protected from possible erosion by storm water run-on or run-off.

4.5.5 Caltrans shall conduct regular inspections, consistent with Caltrans' Maintenance Division's current Pavement Inspection and Slope Inspection programs, of the locations where ADL-contaminated soils have been buried and covered pursuant to this Agreement. If site inspections reveal deterioration of the cover such that conditions

in the Agreement are not met, Caltrans shall notify DTSC and repair or replace the cover within 30 days.

4.6 ADL-Contaminated Soil Reused Or Temporarily Stockpiled Outside The State Right-of-Way.

ADL-contaminated soil removed from the State right-of-way for reuse elsewhere shall be managed appropriately to ensure it does not pose an unacceptable risk to human health or the environment. Soils with a concentration of extractable lead not exceeding 5 mg/l, as determined by the CA-WET, and total lead not exceeding 320 mg/kg is only appropriate for use at commercial/industrial properties. If ADL-contaminated soil is used at a real property located outside the State right-of-way, Caltrans shall submit to DTSC a completed "Agreement between a contractor working on State facilities and a real property owner for disposing construction-related material on property owner's property" as part of the Completion Report described in section 4.12. ADL-contaminated soils with a concentration of extractable lead not exceeding 5 mg/l, as determined by the CA-WET, and total lead not exceeding 320 mg/kg may be temporarily stockpiled outside the project-defined construction corridor at a commercial facility of a contractor working on the project for Caltrans if the requirements of sections 4.2 and 4.3 are adhered to. All such stockpiles shall be removed from said commercial facility prior to completion of the highway project unless that location is to be the final resting place of the ADL-contaminated soil, in which case the soils will be managed according to all requirements of this section.

4.7 Field Changes.

4.7.1 Changes in location of ADL-contaminated soil placement, quantities or protection measures from the original design (field changes) shall be noted in the Resident Engineer's Diary within five (5) days of the field change.

4.7.2 Caltrans shall ensure that any field changes are in compliance with the requirements of this Agreement.

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4.8 Land Use Restrictions. For every property where ADL-contaminated soil is buried within State owned highway rights-of-way pursuant to this Agreement, Caltrans shall, pursuant to California Code of Regulations, title 22, section 67391.1, execute a land use covenant imposing appropriate limitations on land use of the property, which shall be binding in perpetuity upon Caltrans or any future owners of the property. The land use covenant, except as provided in section 4.8.1, shall be recorded within the county (or counties) wherein ADL-contaminated soil has been buried.

4.8.1 Properties within State owned highway rights-of-way typically do not have assessor parcel numbers (used to assess taxes) which prevents land use covenants from being properly recorded within the county (or counties) wherein they are located. For any property for which it is not feasible to establish a land use covenant, Caltrans shall meet all the following requirements.

4.8.1.1 Caltrans shall maintain a list, at its statewide office, of all locations where ADL-contaminated soil is placed or buried as part of this Agreement. Prior to any land use change for properties within State highway rights-of-way, the list shall be consulted and steps taken, if necessary, to ensure the land use change does not create an unacceptable risk to human health or the environment related to ADL-contaminated soil.

4.8.1.2 Caltrans shall revise its policy for the relinquishment of property within State highway rights-of-way to ensure that properties with ADL-contaminated soil are properly managed after relinquishment. The revised policy shall require properties relinquished to other government entities to be tracked and managed in a manner equivalent to that required of Caltrans. Properties relinquished to non-governmental entities shall, pursuant to California Code of Regulations, title 22, section 67391.1, execute a land use covenant imposing appropriate limitations on land use of the property, which shall be binding in perpetuity upon the non-governmental entity or any future owners of the property, as part of the relinquishment process. The land use covenant shall be recorded within the county (or counties) wherein ADL-contaminated soil has been buried. DTSC shall provide Caltrans sample land use covenant language upon request.

4.9 Information Available to Public.

4.9.1 Within 30 days of the effective date of this Agreement Caltrans shall post on its public website the URLs of Portable Document Format (PDF) versions of the following documents:

1. this Agreement;
2. the DTSC-prepared fact sheet concerning this Agreement;
3. a list of active projects for which the Agreement is being used to manage ADL-contaminated soil. The list shall be updated with new projects when notification for a specific project is made to DTSC.

4.9.2 Within 30 days of the effective date of this Agreement, DTSC shall post on its public website information regarding the reuse of excavated soils and appropriate land use specific to lead.

4.9.3 Within 30 days of the effective date of this Agreement DTSC and Caltrans will schedule meetings they will both participate in with (1) Caltrans transportation partners (such as cities, counties, and transportation agencies) and (2) the construction industry. The purpose of the meetings will be to explain DTSC's expectations regarding the management of soil containing lead and to explain the need for and implementation of this agreement between DTSC and Caltrans.

4.10 Project Notification. For any highway project for which this Agreement applies or is to be used, Caltrans shall provide written notification to DTSC, within 10 days of when that determination is made, and shall send copies of the notification to the RWQCB, AQMD (or APCD, as applicable), local Certified Uniform Program Agency (CUPA), and the Caltrans Agreement Coordinator. For projects that overlie multiple local agency jurisdictions, all appropriate agencies shall receive a copy of the notification.

4.10.1 The written notification shall include the following information:

1. A statement that the project shall entail excavation, stockpiling and/or burial of ADL-contaminated soil pursuant to this Agreement;
2. Project number;
3. Project description;

4. Project Limits (Route; District - County - Route - Begin Mile Post /End Mile Post);
5. URLs for or Portable Document Format (PDF) versions of the following documents:
   a) the environmental document prepared for the project;
   b) this Agreement; and
   c) the DTSC-prepared fact sheet about this Agreement.
6. Results of laboratory analysis collected during design for the ADL-contaminated soil to be placed within the highway right of way, and the name of the laboratory performing the analyses;
7. Results of laboratory analysis collected during design for the ADL-contaminated soils to be placed at a final destination property other than a landfill and name of the laboratory performing the analyses;
8. Copy of the construction contract specifications which define the management of ADL-contaminated soil; and
9. Definition of the project defined construction corridor if it has already been determined that soil will be moved from one Caltrans project to another and complete project information listed above for both the sending and receiving projects.

4.10.2 The Caltrans-authorized Lead Compliance Plan, authorized Excavation and Transportation Plan, and the contact information for the project resident engineer shall be submitted to DTSC within ten (10) days of document approval or staff identification, respectively.

4.10.3 For purposes of sending a copy of the notification to a local agency that is notified of the project pursuant to separate requirements of that local agency, that separate notification fulfills the requirement of this section only if such notification includes all information listed in 4.10.1 and is sent in advance as required by this subsection.

4.11 <u>Start of Construction Notification.</u> At least five (5) days in advance of initiation of construction on any project for which this Agreement applies or is used, Caltrans shall provide written notification to DTSC containing the following information concerning the project:

1. Project number;
2. Project description;
3. Project Limits (District - County - Route - Begin Postmile /End Postmile);

4. Anticipated start and end dates of the construction phase of the project;
5. Contact information for the project resident engineer;
6. A list of Caltrans contractors to be involved in the construction phase of the project;
7. Definition of the project defined construction corridor if soil will be moved from one Caltrans project to another. Include complete project information listed above for both the sending and receiving projects; and
8. The address and property owner information for the location where the contractor will stockpile or dispose nonhazardous ADL-contaminated soil with a total lead concentration between 80 and 320 mg/kg.

4.12 <u>Completion Report.</u> Within 180 days of completion of the construction phase of any project for which this Agreement applies or is used, provide to DTSC, in writing, the following:

4.12.1

1. Project number;
2. Project description;
3. Project limits (District - County - Route - Begin Postmile /End Postmile);
4. Actual start and end dates of construction; and
5. A list of all USEPA ID numbers (including temporary ID numbers) assigned by DTSC for use on the project.

4.12.2 If ADL-contaminated soil was buried in accordance with section 4.5 of this Agreement within the State right-of-way as part of the project, the following information:

1. All survey data for the placement location, including precise latitude and longitude, elevation (top and bottom in North American Vertical Datum of 1988[NAVD 88]), postmiles and highway number;
2. The approximate volume, in cubic yards, of ADL-contaminated soil buried;
3. The historical maximum elevation of the water table underlying the burial location NAVD 88;
4. The results of laboratory analysis collected during construction, if any, for the ADL-contaminated soil placed, and name of the laboratory performing the analyses;
5. Type of cover (soil or pavement);
6. Thickness of cover used; and
7. Copies of any and all bills of lading used for transporting ADL-contaminated soil to the active construction zone of the project.

4.12.3 For any ADL-contaminated soils that were permanently removed from the highway right of way, the following information:

1. The final destination of the soils (landfill, private property, other);
2. Copies of any and all bills of lading and hazardous waste manifests used to transport the ADL-contaminated soils;
3. The name and contact information for the landfill or property owner of the final destination property;
4. If not a landfill, the zoning for the final destination property;
5. The volume of ADL-contaminated soil moved to a landfill and/or final destination property;
6. If not a landfill, whether the ADL-contaminated soils were stockpiled or used as fill; and
7. For ADL-contaminated soils placed at a final destination property other than a landfill, the results of laboratory analysis collected during construction, if any, and the name of the laboratory performing the analyses.

4.13 Project Documentation Availability. Following construction contract acceptance, Caltrans shall maintain, at its statewide office or appropriate District or Regional office, individual project records containing information regarding all projects for which this Agreement applies or is used, and shall ensure that the information is readily accessible to the public. The project records for each project shall include:

1. A copy of the Agreement and all attachments thereto;
2. Copies of the project-specific information submitted to DTSC pursuant to this Agreement; and
3. A map showing the mappable survey data for each burial location.

4.14 Transition Plan. Transition of existing highway projects to the requirements of this Agreement shall be done according to Exhibit A. All projects that continue to follow the requirements of 2009 Variance No. V09HQSCD006, as described in the transition plan, after the date of this Agreement must be advertised for construction by July 1, 2020.

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4.15 **Public Health.** DTSC retains the right to require Caltrans or any future owner to remove, and properly dispose of ADL-contaminated soil in the event DTSC determines it is necessary for protection of human health or the environment.

Kome Ajise
Chief Deputy Director, Caltrans

Kome Ajise
Caltrans

6/28/16
DATE

Raymond Leclerc, P.E.
Assistant Deputy Director
Brownfields and Environmental Restoration Program

DTSC

6/29/16
DATE

Exhibit A
Transition Plan for existing projects

Exhibit B
2009 Variance

Exhibit C
Transition Plan project list

EXHIBIT A

TRANSITION PLAN
July 2016

Introduction

This plan details how projects will transition from operating under Department of Toxic Substances Control (DTSC) Variance No. V09HQSCD006 (Variance) to operating under the 2016 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils (Agreement) for specified existing Caltrans projects. For purposes of this transition plan, aerially deposited lead (ADL)-contaminated soil is defined as in section 3.1.1 of the Agreement. Determinations regarding ADL-contaminated soil will be based on the upper 95% UCL in cases where this information is available. If this type of data analysis has not been performed it will be based on the maximum lead value detected. Lead-contaminated soil is defined as in section 6. of the Variance (Exhibit B of the Agreement).

Background – Caltrans Project Development Process

The development of transportation projects is controlled by State and federal laws, regulations, and policies. Projects are first considered and planning begun years in advance of design and construction. Per the Federal Highway Administration, transportation planning is based on a 20 year cycle.
Project development is composed of four major steps:

1. Programming and Project Initiation Document (PID, also identified as the K phase);
2. Project Acceptance & Environmental Document (PA&ED, also identified as the 0 phase);
3. Plans, Specifications and Estimates (PS&E, also identified as the 1 phase); and
4. Construction (also identified as the 3 and 4 phases).

PID
During the PID phase project candidates are identified and project initiation documents prepared. These documents outline the purpose and need of the potential project and a preliminary rough cost scope and schedule is sketched out. Preliminary environmental screening is done. At the end of the PID phase potential projects are programmed, which means that support costs are allocated based on a preliminary budget so that detailed studies may be performed.

PA&ED
During the PA&ED phase detailed studies are performed to meet California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) requirements as well as to support preparation of a Project Report (a preliminary design document). Aerially deposited lead studies are normally performed during this phase.

The budget for these studies is set in the PID phase based on knowledge of the project area.

At the end of PA&ED the project alternative is selected, the cost and schedule is officially identified, and continuing projects are given Project Approval. For most projects the California Transportation Commission (CTC) votes so that the project may proceed. If a project requires additional funding after this point is reached, the budget overrun must be explained and successfully justified to the CTC in order for the project to continue. Budget overruns can result in project termination.

PS&E
PS&E is the design phase of the project. Besides preparation of the plans and specifications, needed right of way is purchased, and necessary permits, licenses, agreements, and certifications are obtained. ADL data is evaluated and shared with design staff at the beginning of PS&E so that appropriate and efficient soil management can be incorporated into the project design. At the end of PS&E the project is advertised and the construction contract is awarded. Depending on the size and complexity of a project PS&E can take as little as a few months or as long as 30 months. A typical length of time for PS&E is 18 months.

Construction
Construction is performed by contractors reporting either directly to Caltrans staff or to a Caltrans partner in the case of some partnered projects. Depending on the size and complexity of the project, construction can take as little as a few months to as long as 10 years. The contingency allowed on Caltrans construction projects is only 5% so budget maintenance is critical.

Transition of existing Caltrans Projects

The requirements of the Agreement, described in sections 3 and 4 of the Agreement, shall be fully applied to all projects that have not completed the Project Approval and Environmental Document (PA&ED) milestone prior to July 1, 2016. PA&ED is defined in Caltrans' "Workplan Standards Guide" which is accessible at: http://www.dot.ca.gov/hq/projmgmt/documents/wsg/WSG_v11.1_2015.pdf.

This transition plan applies to existing projects that have completed the PA&ED milestone prior to July 1, 2016. Those projects for which the transition plan applies or is used shall comply with the requirements listed below in sections 1 through 6. These requirements are the requirements originally set forth in DTSC Variance No. V09HQSCD006 with added reporting requirements for Caltrans.

1. Provided Caltrans meets the terms and conditions described below in section 2, DTSC waives the hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 for the lead-contaminated soil that Caltrans reuses in projects that would require Caltrans to obtain a permit for a disposal facility and any other generator requirements that

concern the transportation, manifesting, storage and land disposal of hazardous waste.

2. In order for the provisions discussed in section 1 to be waived, lead-contaminated soil must not exceed the contaminant concentrations discussed below and Caltrans management practices must meet all the following conditions:

   a) Caltrans implementation of the transition plan shall comply with all applicable state laws and regulations for water quality control, water quality control plans, waste discharge requirements (including storm water permits), and others issued by the State Water Resources Control Board (SWRCB) and/or a California Regional Water Quality Control Board (RWQCB). Caltrans shall provide written notification to the appropriate RWQCB at least 30 days prior to advertisement for bids of projects for which this transition plan applies or is used, or as otherwise negotiated with the SWRCB or appropriate RWQCB, and as specified in section 2u).

   b) The provisions waived in section 1 shall only be applied to lead-contaminated soil that is not a RCRA hazardous waste and is hazardous primarily because of aerially-deposited lead contamination associated with exhaust emissions from the operation of motor vehicles. The transition plan is not applicable to any other hazardous waste.

   c) Soil containing 1.5 mg/l extractable lead or less (based on a modified waste extraction test using deionized water as the extractant) and 1411 mg/kg or less total lead may be used as fill provided that the lead-contaminated soil is placed a minimum of five (5) feet above the maximum historical water table elevation and covered with at least one (1) foot of nonhazardous soil that will be maintained by Caltrans to prevent future erosion.

   d) Soil containing 150 mg/L extractable lead or less (based on a modified waste extraction test using deionized water as the extractant) and 3397 mg/kg or less total lead may be used as fill provided that the lead-contaminated soils are placed a minimum of five (5) feet above the maximum historical water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

   e) Lead-contaminated soil with a pH less than 5.5 but greater than 5.0 shall only be used as fill material under the paved portion of the roadway. Lead-contaminated soil with a pH at or less than 5.0 shall be managed as a hazardous waste.

   f) For each project that has the potential to generate waste by disturbing lead-contaminated soil, Caltrans shall conduct sampling and analysis to adequately characterize the soils containing aerially deposited lead in the areas of planned excavation along the project route. Such sampling and analysis shall include the Toxicity Characteristic Leaching Procedure (TCLP) as prescribed by the United

States Environmental Protection Agency to determine whether concentrations of contaminants in soil exceed federal criteria for classification as a hazardous waste.

g) Lead-contaminated soil managed pursuant to this transition plan shall not be moved outside the designated corridor boundaries (see section 2t below). All lead-contaminated soil not buried and covered within the same Caltrans corridor where it originated is not eligible for management under this transition plan and shall be managed as a hazardous waste.

h) Lead-contaminated soil managed pursuant to this transition plan shall not be placed in areas where it would come in contact with groundwater or surface water (such as streams and rivers).

i) Lead-contaminated soil managed pursuant to this transition plan shall be buried and covered only in locations that are protected from erosion that may result from storm water run-on and run-off.

j) The lead-contaminated soil shall be buried and covered in a manner that will prevent accidental or deliberate breach of the asphalt, concrete, and/or cover soil.

k) The presence of lead-contaminated soil shall be incorporated into the projects' as-built drawings. The as-built drawings shall be annotated with the location, representative analytical data, and volume of lead-contaminated soil. The as-built drawings shall also state the depth of the cover. These as-built drawings shall be retained by Caltrans.

l) Caltrans shall ensure that no other hazardous wastes, other than the lead-contaminated hazardous waste soil, are placed in the burial areas.

m) Lead-contaminated soil shall not be buried within ten (10) feet of culverts or locations subject to frequent worker exposure.

n) Excavated lead-contaminated soil not placed into the designated area (fill area, roadbed area) by the end of the working day shall be stockpiled and covered with sheets of polyethylene or at least one foot of non-hazardous soil. The lead-contaminated soil, while stockpiled or under transport, shall be protected from contacting surface water and from being dislodged or transported by wind or storm water. The stockpile covers shall be inspected at least once a week and within 24 hours after rainstorms. If the lead-contaminated soil is stockpiled for more than 4 days from the time of excavation, Caltrans shall restrict public access to the stockpile by using barriers that meet the safety requirements of the construction zone. The lead-contaminated soil shall be stockpiled for no more than 90 days from the time the soil is first excavated. If the contaminated soil is stockpiled beyond the 90 day limit Caltrans shall:

i. Notify DTSC in writing of the 90 day exceedance and expected date of removal;

ii. Perform weekly inspections of the stockpiled material to ensure that there is adequate protection from run-on, runoff, public access, and wind dispersion; and

iii. Notify DTSC on weekly basis of the stockpile status until the stockpile is removed.

The lead-contaminated soil shall be stockpiled for no more than 180 days from the time the soil is first excavated.

o) Caltrans shall ensure that all stockpiling of lead-contaminated soil remains within the project area of the specified corridor. Stockpiling of lead-contaminated soil within the specified corridor, but outside the project area, is prohibited.

p) Caltrans shall conduct confirmatory sampling of any stockpile area in areas not known or expected to contain lead-contaminated soil after removal of the lead-contaminated soil to ensure that contamination has not been left behind or has not migrated from the stockpiled material to the surrounding soils.

q) Caltrans shall stockpile lead-contaminated soil only on high ground (i.e. no sump areas or low points) so that stockpiled soil will not come in contact with surface water run-on or run-off.

r) Caltrans shall not stockpile lead-contaminated soil in environmentally and ecologically sensitive areas.

s) Caltrans shall ensure that storm/rain run-off that has come into contact with stockpiled lead-contaminated soil will not flow to storm drains, inlets, or waters of the State.

t) Caltrans may dispose of the lead-contaminated soil only within the operating right-of-way of an existing highway, as defined in Streets and Highways Code, section 23. Caltrans may move lead-contaminated soil from one Caltrans project to another Caltrans project only if the lead-contaminated soil remains within the same designated corridor.

Caltrans shall record any movement of lead-contaminated soil by using a bill of lading. The bill of lading must contain: 1) the US DOT description including shipping name, hazard class and ID number; 2) handling codes; 3) quantity of material; 4) volume of material; 5) date of shipment; 6) origin and destination of shipment; and 7) any specific handling instructions. The bill of lading shall be referenced in and kept on file with the project's as-built drawings. The lead-contaminated soil must be kept covered during transportation.

u) For each specific project where this transition plan applies or is to be used for the management of lead-contaminated soils all of the following information shall be submitted in writing to DTSC (and others as specified). If the submission date for a particular notification occurred prior to July 1, 2016 then Caltrans shall submit any

required information not included in the original notification with the Completion Report:

i. Project Notification. For any highway project for which this transition plan applies or is to be used to manage lead-contaminated soil, Caltrans shall provide written notification to DTSC within 10 days of when that determination is made, and shall send copies of the notification to the RWQCB, Air Quality Management District (AQMD) (or Air Pollution Control District, as applicable), local Certified Uniform Program Agency (CUPA), and the Caltrans Agreement Coordinator. For projects that overlie multiple local agency jurisdictions, all appropriate agencies shall receive a copy of the notification. The written notification shall include the following information:

1. A statement that the project shall entail excavation, stockpiling and/or burial of lead-contaminated soil pursuant to this Agreement;
2. Project number;
3. Project description;
4. Project Limits (Route; District - County - Route - Begin Post Mile /End Mile Post);
5. URLs for or Portable Document Format (PDF) versions of the following documents:
    a. The environmental document prepared for the project;
    b. This Agreement; and
    c. The DTSC-prepared fact sheet about this Agreement.
6. Results of laboratory analysis collected during design for the lead-contaminated soil to be placed within the highway right of way, and the name of the laboratory performing the analyses;
7. Copy of the construction contract specifications which define the management of lead-contaminated soil; and
8. Definition of the project defined construction corridor if it has already been determined that soil will be moved from one Caltrans project to another. Include complete project information listed above for both the sending and receiving projects.

ii. The Caltrans-authorized Lead Compliance Plan, authorized Excavation and Transportation Plan, and the contact information for the project resident engineer shall be submitted to DTSC within ten (10) days of document approval or staff identification, respectively.

iii. For purposes of sending a copy of the project notification to a local agency that is notified of the project pursuant to separate requirements of that local

agency, that separate notification fulfills this requirement only if such notification includes all information listed above and is sent in advance as required by this section.

iv. Start of Construction Notification. At least five (5) days in advance of initiation of construction on any project for which this transition plan applies or is used, Caltrans shall provide written notification to DTSC containing the following information concerning the project:

1. Project number;

2. Project description;

3. Project Limits (District - County - Route - Begin Post Mile /End Post Mile);

4. Anticipated start and end dates of the construction phase of the project;

5. Contact information for the project resident engineer;

6. A list of Caltrans contractors to be involved in the construction phase of the project; and

7. Definition of the project defined construction corridor if soil will be moved from one Caltrans project to another. Include complete project information listed above for both the sending and receiving projects.

v. Completion Report. Caltrans will provide in writing to DTSC the following information within 180 days of completion of the construction phase for any highway project for which Caltrans managed lead-contaminated soil under this transition plan:

1. Project number;
2. Project description;
3. Project Limits (District - County - Route - Begin Post Mile /End Post Mile);
4. Actual start and end dates of construction; and
5. A list of all USEPA ID numbers (including temporary ID numbers) assigned by DTSC for use on the project.

If lead-contaminated soil was buried within the State right-of-way as part of the project, the following information:

6. All survey data for the placement location, including precise latitude and longitude, elevation (top and bottom in North American Vertical Datum of 1988[NAVD 88]), Post Miles and highway number;

7. The approximate volume, in cubic yards, of lead-contaminated soil buried;
8. The historical maximum elevation of the water table underlying the burial location NAVD 88;
9. the results of laboratory analysis collected during construction, if any, for the lead-contaminated soil placed, and name of the laboratory performing the analyses;
10. type of cover (soil or pavement);
11. thickness of cover used; and
12. copies of any and all bills of lading used for transporting lead-contaminated soil to the active construction zone of the project.

vi. Project Documentation Availability. Following construction contract acceptance, Caltrans shall maintain, at its statewide office or appropriate District or Regional office, individual project records containing information regarding all projects for which this transition plan applies or is used, and shall ensure that the information is readily accessible to the public. The project records for each project shall include:

1. A copy of the Agreement and all attachments thereto;

2. Copies of the project-specific information submitted to DTSC pursuant to this transition plan, and

3. The “as-built” plans for each burial location.

v) Changes in location of lead-contaminated soil placement, quantities or protection measures (field changes) shall be noted in the resident engineer's project log within five (5) days of the field change.

w) Caltrans shall ensure that field changes are in compliance with the requirements of this transition plan.

x) Operational procedures described in the CEQA Initial Study shall be followed by Caltrans for activities conducted under this transition plan.

y) Caltrans shall implement appropriate health and safety procedures to protect its employees and the public, and to prevent or minimize exposure to potentially hazardous wastes. A project-specific health and safety plan must be prepared and implemented. The monitoring and exposure standards shall be based on construction standards for exposure to lead in California Code of Regulations, title 8, section 1532.1.

z) The Coordinators identified in section 3.9 of the Agreement will also be the Coordinators for the transition plan. These Coordinators will be the primary points

of contact for information flowing to, or received from, DTSC regarding any matter or submission under this transition plan.

aa) Caltrans shall conduct regular inspections, consistent with Caltrans' Maintenance Division's current Pavement Inspection and Slope Inspection programs, of the locations where lead-contaminated soil has been buried and/or covered pursuant to this transition plan. If site inspection reveals deterioration of cover so that conditions in the transition plan are not met, Caltrans shall repair or replace the cover.

bb) Caltrans shall develop and implement record keeping mechanisms to record and retain permanent records of all locations where lead-contaminated soil has been buried per this transition plan. The records shall be made available to DTSC.

cc) If areas within the State owned highway rights-of-way subject to the terms of this transition plan are sold, relinquished or abandoned (including roadways), all future property owners shall be notified in writing in advance by Caltrans of the requirements of section 4.8 of the Agreement, and Caltrans shall provide the owner with a copy of the Agreement. A copy of such a notice shall be sent to DTSC and contain the corridor location and project identification information. Caltrans shall also disclose to DTSC and the new owner the location of areas where lead-contaminated soil has been buried. Future property owners shall be subject to the same requirements set forth in the Agreement as Caltrans.

dd) For the purposes of informing the public about instances where the transition plan is implemented, Caltrans shall:

i. Maintain current fact sheets at all Caltrans resident engineer offices and the Caltrans District office. Caltrans shall make the fact sheets available to anyone expressing an interest in work related to soils contaminated with lead.

ii. Maintain copies of all reports submitted to DTSC at the District office. Caltrans shall ensure that the reports are readily accessible to the public.

ee) Lead-contaminated soil may be buried only within the right-of-way in areas where access is limited or where lead-contaminated soil is covered or contained by a pavement structure.

ff) Dust containing lead-contaminated soil must be controlled. Water or dust palliative may be applied to control dust. If visible dust migration occurs, all excavation, stockpiling and truck loading and burying must be stopped. Operating under this transition plan confers no relief on Caltrans from compliance with the laws, regulations and requirements enforced by any local air district or the California Air Resources Board.

gg) Sampling and analysis is required to show the lead-contaminated soil meets the transition plan criteria. All sampling and analysis must be

conducted in accordance with the appropriate methods specified in U.S. EPA SW-846.

hh) DTSC retains the right to require Caltrans or any future owner to remove, and properly dispose of, ADL-contaminated soil in the event DTSC determines it is necessary for protection of public health, safety or the environment.

ii) DTSC finds that some projects involving lead-contaminated soil are joint projects between Caltrans and other government entities. In these joint projects, Caltrans may not be the lead agency implementing the project although Caltrans is still involved if the project occurs on its right-of-way.

Caltrans may use this transition plan for existing joint projects where Caltrans and local government entities are involved provided that 1) the project is within the Caltrans' Right-of-Way and the plan is only implemented on State-owned highway rights-of-way; 2) Caltrans reviews/ oversees all phases of the project including design, contracting, environmental assessment, and construction, as well as operation and maintenance of the project segments within Caltrans' Right-of-Way; and 3) Caltrans oversees the project to verify all transition plan conditions/requirements are complied with. Caltrans will be fully responsible for lead-contaminated soil related notification and implementation in these joint projects.

3. A list of projects involving lead-contaminated soil for which the transition plan applies or is used is attached. Projects involving lead-contaminated soil not on the list must fully comply with the requirements of the Agreement regardless of whether they have been given Project Approval prior to July 1, 2016. If it is discovered after June 30, 2016 that one or more projects that were eligible to use the transition plan have been inadvertently omitted from the list provided to DTSC, Caltrans will request an exception to add those projects. DTSC will respond to Caltrans request within 10 business days. Caltrans may remove projects from the list at their discretion and shall provide DTSC an updated project list within 30 days of such an action.

4. If a shelved highway project that includes management of lead-contaminated soil under the Transition Plan has to be redesigned and Caltrans has to submit a request to the California Transportation Commission for additional capital outlay funding, then the Transition Plan no longer applies and the requirements of the Agreement shall be fully applied.

5. The requirements of the Agreement shall be fully applied to all projects advertised for construction after July 1, 2020.

6. For any ADL-contaminated soils that were permanently removed from the highway right of way after June 30, 2016 as part of a highway project, Caltrans shall provide

the following information in writing to DTSC within 180 days of completion of the construction phase:

a) Project number;

b) Project description;

c) Project limits (District - County - Route - Begin Post Mile /End Post Mile);

d) Actual start and end dates of construction;

e) The destination of the soils (landfill, private property, other);

f) Copies of any and all bills of lading and hazardous waste manifests used to transport the ADL-contaminated soils;

g) The name and contact information for the landfill or property owner/operator of the destination property;

h) If not a landfill, the zoning for the destination property;

i) The volume of ADL-contaminated soil moved to a landfill and/or the destination property;

j) If not a landfill, whether the ADL-contaminated soils were stockpiled or used as fill; and

k) If not a landfill, the results of laboratory analysis for the ADL-contaminated soils collected during construction, if any, and the name of the laboratory performing the analyses.

EXHIBIT B

California Environmental Protection Agency
Department of Toxic Substances Control

VARIANCE

Applicant Names:

State of California
Department of Transportation
(Caltrans)
1120 N Street
Sacramento, California 95814

Variance No. V09HQSCD006

Effective Date: July 1, 2009

Expiration Date: July 1, 2014

Modification History:

Pursuant to California Health and Safety Code, Section 25143, the Department of Toxic Substances Control hereby issues the attached Variance consisting of 9 pages to the Department of Transportation.

Beverly Rikala
Team Leader, Operating Facilities Team
Department of Toxic Substances Control

Date:

1. INTRODUCTION.

a) Pursuant to Health and Safety Code, section 25143, the California Department of Toxic Substances Control (DTSC) grants this variance to the applicant below for waste considered to be hazardous solely because of its lead concentrations and as further specified herein.

b) DTSC hereby grants this variance only from the requirements specified herein and only in accordance with all terms and conditions specified herein.

2. IDENTIFYING INFORMATION.

APPLICANT/OWNER/OPERATOR

State of California
Department of Transportation, (Caltrans)
All Districts

3. TYPE OF VARIANCE.

Generation, Manifest, Transportation, Storage and Disposal.

4. ISSUANCE AND EXPIRATION DATES.

DATE ISSUED: July 1, 2009 EXPIRATION DATE: July 1, 2014

5. APPLICABLE STATUTES AND REGULATIONS. The hazardous waste that is the subject of this variance is fully regulated under Health and Safety Code, section 25100, et seq. and California Code of Regulations, title 22, division 4.5 except as specifically identified in Section 8 of this variance.

6. DEFINITION. For purposes of this variance, “lead-contaminated soil(s)” shall mean soil that meets the criteria for hazardous waste but contains less than 3397 mg/kg total lead and is hazardous primarily because of aerially-deposited lead contamination associated with exhaust emissions from the operation of motor vehicles.

7. FINDINGS/DETERMINATIONS. DTSC has determined that the variance applicant meets the requirements set forth in Health and Safety Code, section 25143 for a variance from specific regulatory requirements as outlined in Section 8 of this variance. The specific determinations and findings made by DTSC are as follows:

a) Caltrans intends to excavate, stockpile, transport, bury and cover large volumes of soil associated with highway construction projects. In the more urbanized highway corridors around the State this soil is contaminated with lead, primarily due to historic emissions from automobile exhausts. In situ sampling and laboratory testing has shown that some of the soil contains concentrations of lead in excess of State regulatory thresholds, and thus any generated waste from disturbance of the soil

would be regulated as hazardous waste. Such soil contains a Total Threshold Limit Concentration (TTLC) of 1000 milligrams per kilogram (mg/kg) or more lead and/or it meets or exceeds the Soluble Threshold Limit Concentration (STLC) for lead of 5 milligrams per liter (mg/l). A Human Health Risk Assessment prepared for this variance concludes that soil contaminated with elevated concentrations of lead can be managed in a way that presents no significant risk to human health.

b) The lead-contaminated soil will be placed only in Caltrans' right-of-way. Depending on concentration levels, the wastes will be covered with a minimum thickness of one (1) foot of non-hazardous soil or asphalt/concrete cover and will always be at least five (5) feet above the highest groundwater elevation. Caltrans will assure that proper health and safety procedures will be followed for workers, including any persons engaged in maintenance work in areas where the waste has been buried and covered.

c) DTSC finds and requires that the lead-contaminated soil excavated, stockpiled, transported, buried and covered pursuant to this variance is a non-RCRA hazardous waste, and that the waste management activity is insignificant as a potential hazard to human health and safety and the environment, when managed in accordance with the conditions, limitations and other requirements specified in this variance.

8. PROVISIONS WAIVED.

Provided Caltrans meets the terms and conditions of this variance, DTSC waives the hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 for the lead-contaminated soil that Caltrans reuses in projects that would require Caltrans to obtain a permit for a disposal facility and any other generator requirements that concern the transportation, manifesting, storage and land disposal of hazardous waste.

9. SPECIFIC CONDITIONS, LIMITATIONS AND OTHER REQUIREMENTS.

In order for the provisions discussed in section 8 to be waived, lead-contaminated soil must not exceed the contaminant concentrations discussed below and Caltrans management practices must meet all the following conditions:

a) Caltrans implementation of this variance shall comply with all applicable state laws and regulations for water quality control, water quality control plans, waste discharge requirements (including storm water permits), and others issued by the State Water Resources Control Board (SWRCB) and/or a California Regional Water Quality Control Board (RWQCB). Caltrans shall provide written notification to the appropriate RWQCB at least 30 days prior to advertisement for bids of projects that involve invocation of this variance, or as otherwise negotiated with the SWRCB or appropriate RWQCB.

b) The waivers in this variance shall only be applied to lead-contaminated soil that is not a RCRA hazardous waste and is hazardous primarily because of aerially-

deposited lead contamination associated with exhaust emissions from the operation of motor vehicles. The variance is not applicable to any other hazardous waste.

c) Soil containing 1.5 mg/l extractable lead or less (based on a modified waste extraction test using deionized water as the extractant) and 1411 mg/kg or less total lead may be used as fill provided that the lead-contaminated soil is placed a minimum of five (5) feet above the maximum historic water table elevation and covered with at least one (1) foot of nonhazardous soil that will be maintained by Caltrans to prevent future erosion.

d) Soil containing 150 mg/L extractable lead or less (based on a modified waste extraction test using deionized water as the extractant) and 3397 mg/kg or less total lead may be used as fill provided that the lead-contaminated soils are placed a minimum of five (5) feet above the maximum historic water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

e) Lead-contaminated soil with a pH less than 5.5 but greater than 5.0 shall only be used as fill material under the paved portion of the roadway. Lead-contaminated soil with a pH at or less than 5.0 shall be managed as a hazardous waste.

f) For each project that has the potential to generate waste by disturbing lead-contaminated soil (as defined in 6), Caltrans shall conduct sampling and analysis to adequately characterize the soils containing aerially deposited lead in the areas of planned excavation along the project route. Such sampling and analysis shall include the Toxicity Characteristic Leaching Procedure (TCLP) as prescribed by the United States Environmental Protection Agency to determine whether concentrations of contaminants in soil exceed federal criteria for classification as a hazardous waste.

g) Lead-contaminated soil managed pursuant to this variance shall not be moved outside the designated corridor boundaries (see paragraph t) below. All lead-contaminated soil not buried and covered within the same Caltrans corridor where it originated is not eligible for management under this variance and shall be managed as a hazardous waste.

h) Lead-contaminated soil managed pursuant to this variance shall not be placed in areas where it would become in contact with groundwater or surface water (such as streams and rivers).

i) Lead-contaminated soil managed pursuant to this variance shall be buried and covered only in locations that are protected from erosion that may result from storm water run-on and run-off.

j) The lead-contaminated soil shall be buried and covered in a manner that will prevent accidental or deliberate breach of the asphalt, concrete, and/or cover soil.

k) The presence of lead-contaminated soil shall be incorporated into the projects' as-built drawings. The as-built drawings shall be annotated with the location, representative analytical data, and volume of lead-contaminated soil. The as-built drawings shall also state the depth of the cover. These as-built drawings shall be retained by Caltrans.

l) Caltrans shall ensure that no other hazardous wastes, other than the lead-contaminated hazardous waste soil, are placed in the burial areas.

m) Lead-contaminated soil shall not be buried within ten (10) feet of culverts or locations subject to frequent worker exposure.

n) Excavated lead-contaminated soil not placed into the designated area (fill area, roadbed area) by the end of the working day shall be stockpiled and covered with sheets of polyethylene or at least one foot of non-hazardous soil. The lead-contaminated soil, while stockpiled or under transport, shall be protected from contacting surface water and from being dislodged or transported by wind or storm water. The stockpile covers shall be inspected at least once a week and within 24 hours after rainstorms. If the lead-contaminated soil is stockpiled for more than 4 days from the time of excavation, Caltrans shall restrict public access to the stockpile by using barriers that meet the safety requirements of the construction zone. The lead-contaminated soil shall be stockpiled for no more than 90 days from the time the soil is first excavated. If the contaminated soil is stockpiled beyond the 90 day limit Caltrans shall:

1. notify DTSC in writing of the 90 day exceedance and expected date of removal;
2. perform weekly inspections of the stockpiled material to ensure that there is adequate protection from run-on, runoff, public access, and wind dispersion; and
3. notify DTSC on weekly basis of the stockpile status until the stockpile is removed.

The lead-contaminated soil shall be stockpiled for no more than 180 days from the time the soil is first excavated.

o) Caltrans shall ensure that all stockpiling of lead-contaminated soil remains within the project area of the specified corridor. Stockpiling of lead-contaminated soil within the specified corridor, but outside the project area, is prohibited.

p) Caltrans shall conduct confirmatory sampling of any stockpile area in areas not known or expected to contain lead-contaminated soil after removal of the lead-contaminated soil to ensure that contamination has not been left behind or has not migrated from the stockpiled material to the surrounding soils.

q) Caltrans shall stockpile lead-contaminated soil only on high ground (i.e. no sump areas or low points) so that stockpiled soil will not come in contact with surface

water run-on or run-off.

r) Caltrans shall not stockpile lead-contaminated soil in environmentally and ecologically sensitive areas.

s) Caltrans shall ensure that storm/rain run-off that has come into contact with stockpiled lead-contaminated soil will not flow to storm drains, inlets, or waters of the State.

t) Caltrans may dispose of the lead-contaminated soil only within the operating right-of-way of an existing highway, as defined in Streets and Highways Code, section 23. Caltrans may move lead-contaminated soil from one Caltrans project to another Caltrans project only if the lead-contaminated soil remains within the same designated corridor.

Caltrans shall record any movement of lead-contaminated soil by using a bill of lading. The bill of lading must contain: 1) the US DOT description including shipping name, hazard class and ID number; 2) handling codes; 3) quantity of material; 4) volume of material; 5) date of shipment; 6) origin and destination of shipment; and 7) any specific handling instructions. The bill of lading shall be referenced in and kept on file with the project's as-built drawings. The lead-contaminated soil must be kept covered during transportation.

u) For each specific corridor where this variance is to be implemented, all of the following information shall be submitted in writing to DTSC at least five (5) days before construction of any project begins:

1. plan drawing designating the boundaries of the corridor where lead-contaminated soils will be excavated, stockpiled, buried and covered;

2. a list of the Caltrans projects that the corridor encompasses;

3. a list of Caltrans contractors that will be conducting any phase of work on any project affected by this variance;

4. duration of corridor construction;

5. location where sampling and analytical data used to make lead concentration level determinations are kept (e.g. a particular Caltrans project file);

6. name and phone number (including area code) of project resident engineer and project manager;

7. location where Caltrans and contractor health and safety plan and records are kept;

8. location of project special provisions (including page or section number) for soil excavation, transportation, stockpile, burial and placement of cover material;

9. location of project drawings (including drawing page number) for soil excavation, burial and placement of cover in plan and cross section (for example, "The project plans are located at the resident engineer's office located at 5th and Main Streets, City of Fresno, See pages xxxxx of contract xxxx");

10. updated information if a Caltrans project within the corridor is added, changed or deleted; and

11. type of environmental document prepared for each project, date of adoption, document title, Clearing House number and where the document is available for review. A copy of the Caltrans Categorical Exemption, Categorical Exclusion Form, or if filed, the Notice of Exemption for any project shall be submitted to the DTSC Headquarters Project Manager.

v) Changes in location of lead-contaminated soil placement, quantities or protection measures (field changes) shall be noted in the resident engineer's project log within five (5) days of the field change.

w) Caltrans shall ensure that field changes are in compliance with the requirements of this variance.

x) Operational procedures described in the California Environmental Quality Act (CEQA) Special Initial Study shall be followed by Caltrans for activities conducted under this variance.

y) Caltrans shall implement appropriate health and safety procedures to protect its employees and the public, and to prevent or minimize exposure to potentially hazardous wastes. A project-specific health and safety plan must be prepared and implemented. The monitoring and exposure standards shall be based on construction standards for exposure to lead in California Code of Regulations, title 8, section 1532.1.

z) Caltrans shall provide a district Coordinator for this variance. This Coordinator will be the primary point of contact for information flowing to, or received from, DTSC regarding any matter or submission under this variance. Caltrans shall promptly notify DTSC of the name of Coordinator and any change in the Coordinator.

aa) Caltrans shall conduct regular inspections, consistent with Caltrans' Maintenance Division's current Pavement Inspection and Slope Inspection programs, of the locations where lead-contaminated soil has been buried and/or covered pursuant to this variance. If site inspection reveals deterioration of cover so that conditions in the variance are not met, Caltrans shall repair or replace the cover.

bb) Caltrans shall develop and implement a record keeping mechanisms to record and retain permanent records of all locations where lead-contaminated soil has been buried per this variance. The records shall be made available to DTSC.

cc) If areas subject to the terms of this variance are sold, relinquished or abandoned (including roadways), all future property owners shall be notified in writing in advance by Caltrans of the requirements of this variance, and Caltrans shall provide the owner with a copy of the variance. A copy of such a notice shall be sent to DTSC and contain the corridor location and project. Caltrans shall also disclose to DTSC and the new owner the location of areas where lead-contaminated soil has been buried. Future property owners shall be subject to the same requirements as Caltrans.

dd) For the purposes of informing the public about instances where the variance is implemented, Caltrans shall:

1. maintain current fact sheets at all Caltrans resident engineer offices and the Caltrans District office. Caltrans shall make the fact sheets available to anyone expressing an interest in variance-related work.

2. maintain a binder(s) containing copies of all reports submitted to DTSC at the District office. Caltrans shall ensure that the binders are readily accessible to the public.

3. carry out the following actions when it identifies additional projects:

(A) notify the public via a display advertisement in a newspaper of general circulation in that area.

(B) update and distribute the fact sheet to the mailing list and repository locations.

ee) Lead-contaminated soil may be buried only in areas where access is limited or where lead-contaminated soil is covered and contained by a pavement structure.

ff) Dust containing lead-contaminated soil must be controlled. Water or dust palliative may be applied to control dust. If visible dust migration occurs, all excavation, stockpiling and truck loading and burying must be stopped. The granting of this variance confers no relief on Caltrans from compliance with the laws, regulations and requirements enforced by any local air district or the California Air Resources Board.

gg) Sampling and analysis is required to show the lead-contaminated soil meets the variance criteria. All sampling and analysis must be conducted in accordance with the appropriate methods specified in U.S. EPA SW-846.

hh) DTSC retains the right to require Caltrans or any future owner to remove, and properly dispose of, lead-contaminated soil in the event DTSC determines it is necessary for protection of public health, safety or the environment.

ii) DTSC finds that some projects involving lead-contaminated soil are joint projects between Caltrans and other government entities. In these joint projects, Caltrans may not be the lead agency implementing the project although Caltrans is still involved if the project occurs on its right-of-way.

Caltrans may invoke this variance for joint projects where Caltrans and local government entity are involved provided that 1) the project is within the Caltrans Right-of-Way; 2) Caltrans reviews/ oversees all phases of the project including design, contracting, environmental assessment, construction, operation, and maintenance; and 3) Caltrans oversees the project to verify all variance conditions are complied with. Caltrans will be fully responsible for the variance notification and implementation in these joint projects.

jj) All correspondence shall be directed to the following office:

Hazardous Waste Permitting
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826

Attn: Caltrans Lead Variance Notification Unit

10. DISCLAIMER.

a) The issuance of this variance does not relieve Caltrans of the responsibility for compliance with Health and Safety Code, chapter 6.5, or the regulations adopted thereunder, and any other laws and regulations other than those specifically identified in Section 8 of this variance. Caltrans is subject to all terms and conditions herein. The granting of this variance confers no relief from compliance with any federal, State or local requirements other than those specifically provided herein.

b) The issuance of this variance does not release Caltrans from any liability associated with the handling of hazardous waste, except as specifically provided herein and subject to all terms and conditions of this variance.

11. VARIANCE MODIFICATION OR REVOCATION. This variance is subject to review at the discretion of DTSC and may be modified or revoked by DTSC upon change of ownership and at any other time pursuant to Health and Safety Code, section 25143.

12. CEQA DETERMINATION. DTSC adopted a Negative Declaration on June 30, 2009.

Approved:

_____ _____

Date

Beverly Rikala
Operating Facilities Team
Department of Toxic Substances Control

EXHIBIT C

CALTRANS PROJECT LIST

District	EA	County	Route(s)	Post Mile Start	Post Mile End	Current Phase (PA&ED, Design, or Construction) as of January 2016	Local Partner Involved in Project (Yes or No)	Performing AAA (Caltrans, LAMTA, OCTA, SANDAG, etc)
District 01								
None								
District 02								
02	4E650	SIS	96	Bridge Rail Improvement - multiple locations		Design	No	CALTRANS
02	4G380	TRI	299	0	8.3	Design	No	CALTRANS
District 03								
03	3F170	SAC	5/50/51/99	City of Sacramento		Construction	No	CALTRANS
03	3F930	SAC	50	5.3	23.1	Design	No	CALTRANS
District 04								
04	15272	CC	242	0	3.4	Construction	No	CALTRANS
			4	8	25			
04	15330	SCL	101	0	26.7	Construction	No	CALTRANS
04	22911	CC	680/4	Interchange		Design	YES	CCCTA
04	23552	SM	82/92	Interchange		Design	Yes: city S. Mateo	CALTRANS
04	23565	SM	101	1.7	2.1	Design	No	CALTRANS
04	23584	SM	101	16.3	16.9	Construction	Yes: SMCoTA	CALTRANS
04	26409	MRN/SON	101	0	0	Bid Open	Yes: SonCoTA	CALTRANS
04	0A185	SON	101	7.1	8	Construction	YES: Petaluma	CALTRANS
04	0A534	SOL	80	2.1	2.8	Construction	Yes: Solano Trans Auth	CALTRANS
04	0A537	SOL	80/680	Interchange		Design	Yes: SolCoTA	CALTRANS
04	1G621	SM	101	8.8	8.6	Design	Yes: San Carlos	CALTRANS
04	1G940	CC	4	27.5	29	Construction	Yes: Contra Costa Trans	CALTRANS
04	2285E	CC	4	26.6	27.5	Construction	Yes: Contra Costa Trans	CALTRANS
04	2640K	SON	101	3.4	4.1	Construction	Yes: SonCoTA	CALTRANS
04	2908V	ALA	580	7.8	13.6	Construction	Yes: Alameda Trans Auth	CALTRANS
04	2908V	ALA	580	7.8	13.6	Construction	Yes: Ala CoTC	CALTRANS
04	2G850	ALA	580	3.9	4.2	Construction	No	CALTRANS
04	3G160	CC	24	5.3	5.5	Construction	No	CALTRANS
04	4G050	Ala&SCL	680	7.5	9.9	Design	Yes: AlaCoTC	CALTRANS
04	4G080	SOL	80	11.2	29.3	Design	Yes: SolCoTA	CALTRANS
04	4G320	SOL	80	7.3	7.3	Design	YES	CITY OF FAIRFIELD
04	4G510	Sol	80	31	32.6	Design	No	CALTRANS
04	4G680	SCL	280	11.2	11.5	Design	Yes: SCCoTA	CALTRANS
04	4H900	SF	280	0.14	1.46	Construction	No	CALTRANS
District 05								
05	31580	MON	101	0	0	Construction	NO	CALTRANS
05	36150	SLO	101	55.7	57.9	Construction	yes	City of El Paso de Robles
05	44782	SB	101	11.4	11.4	Design	YES	SBCAG
05	44800	MON	068	3.8	4.3	Design	yes	Monterey, City of
05	46580	SCR	001	17.5	17.7	Design	YES	CITY OF SANTA CRUZ
05	47450	SLO	101	5	5	Construction	yes	San Luis Obispo County
05	1E050	MON	101	52.4	60.8	Design	NO	CALTRANS
05	0A050	SB	001	15.6	15.6	Design	NO	CALTRANS

05	0C730	SCR	001	7.6	16.1	Design	YES	SCCRTC
05	0F970	MON	101	62.1	63.2	Design	NO	CALTRANS
05	0G070	SB	101	22.3	23	Construction	yes	CALTRANS
05	0H730	SLO	101	25.5	26.3	Construction	yes	San Luis Obispo, City of
05	0H823	MON	068	12.8	13.2	Design	YES	MONTEREY COUNTY
05	0L570	MON	001	72.3	72.9	Design	yes	Monterey County
05	0N700	SB	101	2	12.3	Design	NO	CALTRANS
05	0Q600	SCR	017	0.7	1.4	Design	NO	CALTRANS
05	1A870	SCR	001	17	17.2	Construction	NO	CALTRANS
05	1C080	SLO	101	44.6	59.7	Design	NO	CALTRANS
05	1C100	SCR	001	Multiple locations - safety pull outs		Design	NO	CALTRANS
05	1C120	SB	101	0	12.7	Design	NO	CALTRANS
05	1C820	SB	101	2.6	11.9	Design	NO	CALTRANS
05	1C890	MON	101	87.3	91.6	Design	NO	CALTRANS
05	1C970	SB	101	17.2	45.9	Design	NO	CALTRANS
05	1G380	MON	101	53.9	57.1	Design	NO	CALTRANS
05	4611U	SB	217	1.1	2.2	Design	yes	Goleta, City of
District 06								
06	42471	KER	119	10	13.3	Construction	NO	CALTRANS
06	43401	TUL	65	15.1	18	Design	NO	CALTRANS
06	47150	TUL	99	39.6	41.3	Design	NO	CALTRANS
06	48450	KER	99/204	Interchange		Design	YES	Bakersfield, City of
06	48460	KER	58	31.7	55.6	PA&ED January 2016	YES	Bakersfield, City of
06	49390	KER	178	0	0.4	Design	YES	Bakersfield, City of
06	0F360	KER	58	46.1	51.7	Construction	YES	CALTRANS
06	0H360	FRE	99	28.1	30.9	Design	YES	Fresno, City of
06	0K290	FRE	99	22.7	28.1	PA&ED April 1, 2016	No	CALTRANS
06	0K810	KER	99/178	Interchange		Design	NO	CALTRANS
06	0Q431	TUL	190	13.1	17.3	PA&ED March 2016	YES	Porterville, City of
06	0R050	TUL	193	4.2	8.3	Design	No	CALTRANS
06	0S480	TUL	65	9.4	14	Design	No	CALTRANS
06	0U520	MAD	99	13.1	19.6	PA&ED April 2016	No	CALTRANS
06	2HT00	FRE	099	23.5	26.6	PA&ED Pending	YES	California High Speed Rail Authority
06	2HT10	FRE	99	23.7	26.2	Design	YES - CHSRA	CALTRANS
06	3HT01	FRE/KIN/TUL	43/137/198/	High Speed Rail Interaction with State Highway System		Design	YES	California High Speed Rail Authority
District 07								
07	11707	LA	10	31.2	33.4	Construction	No	CALTRANS
07	12184	LA	5	26.7	36.4	Construction	No	CALTRANS
07	20211	LA	710	17.2	26.4	Construction	No	CALTRANS
07	20212	LA	710	21.9	23.1	Design	No	CALTRANS
07	21593	LA	5	2.7	4	Construction	No	CALTRANS
07	21594	LA	5	4	5.8	Construction	No	CALTRANS
07	21595	LA	5	5.8	6.8	Construction	No	CALTRANS
07	24540	LA	10	31.1	32.3	Construction	No	CALTRANS
07	25902	LA	5/10/91/110/134	Storm Water Improvements at numerous locations		Construction	No	CALTRANS

07	28150	LA	101	29.2	38.1	Design	No	CALTRANS
07	28910	LA	405	11.7	12.2	PAED/Design	No	CALTRANS
07	29100	LA	14	32.1	59.2	Design	No	CALTRANS
07	29110	LA	101	30.9	38.1	PAED	No	CALTRANS
07	29120	LA	57	7.7	12.2	Design	No	CALTRANS
07	29140	LA	1	56.5	56.9	PAED	No	CALTRANS
07	29230	LA	5	25.6	25.6	PA&ED Feb 2016	No	CALTRANS
07	29370	LA	110	8	9	PAED	No	CALTRANS
07	29510	LA	5	38.8	40.5	PAED	No	CALTRANS
07	29530	LA	110	24.1	31.9	PAED	No	CALTRANS
07	29540	VEN	101	30.2	31.4	PAED	No	CALTRANS
07	29580	LA	60	3.7	6.3	PAED	No	CALTRANS
07	29610	LA	405	0.7	6.7	PAED	No	CALTRANS
07	29630	LA	405	21.5	26.3	PA&ED Pending	No	CALTRANS
07	29740	LA	105	6.6	8	Design	No	CALTRANS
07	29850	LA	405	33	35.5	PAED	No	CALTRANS
07	29950	LA	1	3.8	30.8	Design	No	CALTRANS
07	29960	LA	27	0	11.1	Design	No	CALTRANS
07	30520	VEN	33	15.7	15.7	PAED	No	CALTRANS
07	30600	LA	5	44.2	46	Design	No	CALTRANS
07	30720	LA	91	6.3	6.3	Design	No	CALTRANS
07	31220	VEN	126	1	8.2	PAED	No	CALTRANS
07	31230	LA	14	25.5	35	PAED	No	CALTRANS
07	31250	LA	5	81.8	87.8	PAED	No	CALTRANS
07	31260	LA	5	75	81.8	PAED	No	CALTRANS
07	31280	LA	14	35	53.5	PAED	No	CALTRANS
07	1170U	LA	10	33.4	37.5	Construction	No	CALTRANS
07	1193U	LA	10	37.2	42.4	Construction	No	CALTRANS
07	1218W	LA	5	29.4	31.6	Construction	No	CALTRANS
07	1219U	LA	5	36.4	39.4	Construction	No	CALTRANS
07	1952U	VEN	101	0.1	3	Construction	No	CALTRANS
07	2055A	LA	2	14.1	15.1	Construction	No	CALTRANS
07	2159C	LA	5	1.8	3	Construction	No	CALTRANS
07	2159U	LA	5	0	1.5	Design	No	CALTRANS
07	4T730	LA	405	41.7	41.7	Construction	No	CALTRANS
07	4T770	LA	91	12.96	13.76	Design	No	CALTRANS
07	4T800	LA	405	0.6	0.6	Design	No	CALTRANS
District 08								
08	0A020	RIV	215	15.3	15.7	Design	YES	RCTC
08	0F540	RIV	91	0	13	Construction	YES	SANBAG
08	0J070	SBD	215	0.6	1.7	PS&E	YES	SANBAG
08	0J080	RIV	15	36.8	51.4	PA&ED March 2016	Yes - RCTC	RCTC
08	0J400	SBD	10	4.1	6.1	PA&ED March 2016	Yes	SANBAG
08	0M900	RIV	111	18.4	0	Design	Yes - Riverside County	Riverside County
08	0Q760	SBD	10	0	30.9	Construction	No	Caltrans
08	0R460	RIV	91	10.8	12.9	Construction	NO	CALTRANS
08	1A830	SBD	10	17.8	19.3	PS&E	YES	COUNTY OF SBD
08	1C170	SBD	60	1.86	2.86	PS&E	NO	Caltrans
08	1C180	SBD	60	0	1.86	PS&E	NO	Caltrans
08	1E030	SBD	10	20.1	22	Construction	Yes - SANBAG	SANBAG
08	1E710	SBD	10	31.6	31.9	PA&ED Feb 2016	Yes	SANBAG
08	1F980	RIV	215	17.5	17.5	PA&ED Feb 2016	Yes - City of Menifee	City of Menifee
District 09								
None								

District 10								
10	47210	STA	99	21	22.4	Construction	YES	CALTRANS
10	0E613	SJ	99	6.9	15	Construction	YES	CALTRANS
10	0G440	MER	99	19.3	20.9	Construction	YES	CALTRANS
10	0G470	SJ	005	28.5	35.6	Construction	YES - Stockton	CALTRANS
10	0H890	SJ	120	2.2	2.2	Design	YES	CALTRANS
10	0H910	SJ	205	2.6	5.1	Design	YES	CALTRANS
10	0P740	MER	59	21.5	22.5	Design	YES	CALTRANS
10	0Q880	AMA	49	17	17.5	Construction	YES	CALTRANS
10	0S110	SJ	99	14.4	14.8	Construction	YES	CALTRANS
10	0T910	STA	99	4.3	5	Design	YES	CALTRANS
10	0V070	MER	099	0	18.6	Design	YES - HSRA	California High Speed Rail Authority
10	0Y550	SJ	012	14.9	18.1	Design	No	CALTRANS
10	0Y620	STA	099	13.6	15.1	PA&ED 12/2015 overdue	No	CALTRANS
10	1C421	SJ	099	14	23	Design	No	CALTRANS
10	3A130	MER	140	38.1	38.6	Design	YES	CALTRANS
District 11								
11	00270	SD	5	19.9	21.2	Construction	No	CALTRANS
11	08023	IMP	98	31.6	32.1	Design	No	CALTRANS
11	08027	IMP	98	32.2	32.6	Design	No	CALTRANS
11	08578	SD	163	4.1	4.9	Design	YES - City of San Diego	CALTRANS
11	14665	SD	94/125	10	11.8	Design	No	CALTRANS
11	17790	SD	5	32.9	33.4	PA&ED 4/29/16	No	CALTRANS
11	23580	SD	5	28.4	55.4	Design	YES	CALTRANS
11	23796	SD	8	6.1	10.5	Design	No	CALTRANS
11	24151	SD	163	8.2	9.4	Construction	YES - City of San Diego	City of San Diego
11	24400	SD	5	3.9	9.2	Design	No	CALTRANS
11	26220	SD	75	20.2	22.2	Design	No	CALTRANS
11	26331	IMP	8	38.8	39.2	Design	No	CALTRANS
11	26501	SD	163	0.5	3.2	Construction	No	CALTRANS
11	29200	SD	125	9.8	12.4	PA&ED Jan 2016	No	CALTRANS
11	29520	SD	94	59.7	60.2	Design	No	CALTRANS
11	29910	SD	76	22.2	47.1	PA&ED Jan 2016	No	CALTRANS
11	40570	SD	76	32.6	33.2	Design	No	CALTRANS
11	40640	SD	Various	Bridge Rail modifications at multiple locations		Construction	No	CALTRANS
11	40860	SD	8	0.5	0.7	Design	No	CALTRANS
11	40960	SD	54	0	13	Design	No	CALTRANS
11	40970	SD	8	Roadside Safety Improvements at multiple locations		Design	No	CALTRANS
11	41040	IMP	8	36.5	37.5	Design	No	CALTRANS
11	41080	SD	805	15.7	17.5	Design	No	CALTRANS
11	41090	SD	5	0.3	5.4	Design	No	CALTRANS
11	41120	SD	805	0.3	4	PA&ED May 2016	No	CALTRANS
11	41350	SD	8	15.3	21.6	Construction	No	CALTRANS
11	41430	SD	79	31.3	49.9	PA&ED Jan 2016	No	CALTRANS
11	41440	SD	94	5.8	9.3	PA&ED Jan 2016	No	CALTRANS
11	41480	SD	8	0.1	2	PA&ED Over Due as of 12/2015	No	CALTRANS
11	41480	SD	805	0.1	2	PA&ED Over Due as of 12/2015	No	CALTRANS

11	41550	SD	5, 8, 15, 52, 54, et al	Traffic Management System Modifications		Construction	No	CALTRANS
11	41600	SD	5, 7, 8, 15, 52, et al	Traffic Management System Modifications		Construction	No	CALTRANS
11	41680	SD	163	3.6	3.6	Design	No	CALTRANS
11	41851	IMP	8	41.1	65	PA&ED due 1/19/2016	No	CALTRANS
11	41852	IMP	8	83.1	90	PA&ED Feb 2016	No	CALTRANS
11	42160	SD	78	13	14.1	PA&ED Jan 2016	No	CALTRANS
11	2T170	SD	5	37.5	51.4	Design	YES	CALTRANS
11	2T171	SD	5	37.5	51.4	Design	YES	CALTRANS
11	2T172	SD	5	37.5	39.6	Design	YES	CALTRANS
11	2T175	SD	5	28.7	28.7	Design	YES - VAR	CALTRANS
11	2T210	SD	5	38	51.2	Design	YES	CALTRANS
11	2T211	SD	5	43.4	47.5	Design	YES	CALTRANS
11	2T212	SD	5	47.5	51.2	Design	YES	CALTRANS
11	2T215	SD	5	28.4	29.5	Design	YES	CALTRANS
11	2T260	SD	805	4.4	10	Design	No	CALTRANS
11	2T270	SD	805	12.6	15.9	Design	No	CALTRANS
District 12								
12	0C110	ORA	57	19.9	21.5	Design	City of Brea	City of Brea
12	0C560	ORA	91	7.9	9.5	Construction	No	CALTRANS
12	0C571	ORA	91	0.9	5.4	PAED - Feb 2016	OCTA	OCTA
12	0C890	ORA	5	30.3	34	Design	OCTA	CALTRANS
12	0F04A	ORA	57	12.3	15.2	PA&ED April 2016	OCTA	OCTA
12	0F96A	ORA	5	3	3.7	Construction	OCTA	CALTRANS
12	0F96C	ORA	5	3.7	6.2	Construction	OCTA	CALTRANS
12	0F96E	ORA	5	6.2	8.7	Construction	OCTA	CALTRANS
12	0H045	ORA	405	2.4	3.9	PA&ED March 2016	Yes - OCTA	CALTRANS
12	0H100	ORA	405	10.2	24	Design	Yes - OCTA	OCTA
12	0H20U	ORA	55	2	5.9	Construction	No	CALTRANS
12	0H530	ORA	5/1	Interchange		Design	No	CALTRANS
12	0J340	ORA	55	6.2	10.3	Design	Yes - OCTA	CALTRANS
12	0K021	ORA	5	12.4	14.5	Design	Yes - OCTA	CALTRANS
12	0K022	ORA	5	14.5	17.1	Design	Yes - OCTA	CALTRANS
12	0K023	ORA	5	17.1	18.9	Design	Yes - OCTA	CALTRANS
12	0K330	ORA	91	17.8	18.2	Construction	No	CALTRANS
12	0L92U	ORA	5	0	29.6	Construction	NO	CALTRANS
12	0L090	ORA	57	11	22.5	Design	NO	CALTRANS
12	0L720	ORA	74	2.9	5.1	Design	NO	CALTRANS
12	0L74U	ORA	55	2	11.8	Construction	No	CALTRANS
12	0L850	ORA	5	33.9	43.4	Design	Yes - OCTA	CALTRANS
12	0M120	ORA	5	28.4	28.4	Construction	No	CALTRANS
12	0M340	ORA	73	16.5	16.6	Construction	No	CALTRANS
12	0M350	ORA	405	2.6	6.5	Design	No	CALTRANS
12	0M470	ORA	1	22.7	24.6	Design	No	CALTRANS
12	0M490	ORA	5	1.2	2.2	Design	No	CALTRANS
12	0M500	ORA	55	1.2	17.9	Design	No	CALTRANS
12	0M610	ORA	91	8.9	9.4	Design	No	CALTRANS
12	0M960	ORA	73	22.5	25.7	Design	NO	CALTRANS
12	0N040	ORA	91	7.5	18.9	Design	Yes - OCTA	CALTRANS
12	0N080	ORA	5	33.3	34.5	PA&ED Feb 2016	No	CALTRANS
12	0N110	ORA	133	9.5	9.5	Construction	No	CALTRANS

12	0N270	ORA	91	13.8	13.8	PA&ED April 2016	No	CALTRANS
12	0N280	ORA	22	33.7	33.7	Design	NO	CALTRANS
12	0N330	ORA	5	12.8	21.6	Construction	No	CALTRANS
12	0N340	ORA	57	10.8	21.8	Construction	NO	CALTRANS
12	0N360	ORA	91	1	5.4	Design	No	CALTRANS
12	0N480	ORA	1	19.6	19.8	PA&ED April 2016	YES - City of Newport Beach	City of Newport Beach
12	0N540	ORA	405	8.4	8.4	Construction	No	CALTRANS
12	0N580	ORA	57	14.9	15.2	Design	NO	CALTRANS
12	0N590	ORA	39	11.7	12.2	Design	No	CALTRANS
12	0N640	ORA	5	34.5	37.4	PA&ED March 2016	No	CALTRANS
12	0N670	ORA	5	2.1	3	Design	OCTA	CALTRANS
12	0N680	ORA	72	11.9	11.9	Design	No	CALTRANS
12	0N710	ORA	39	5.7	5.7	PA&ED Jan 2016	No	CALTRANS
12	0N821	ORA	VAR	Traffic Management System Installation		Design	No	CALTRANS
12	0N822	ORA	VAR	Traffic Management System Installation		Design	No	CALTRANS
12	0N880	ORA	405	1.1	1.1	Design	NO	CALTRANS
12	0N910	ORA	1	18.2	18.2	PA&ED March 2016	No	CALTRANS
12	0N980	ORA	55	5.7	6	Design	NO	CALTRANS
12	0N990	ORA	39	1.88	1.88	PA&ED May 2016	NO	CALTRANS
12	0P020	ORA	1	24.3	24.3	PA&ED April 2016	No	CALTRANS
12	0P040	ORA	405	7.8	7.8	Design	NO	CALTRANS
12	0P140	ORA	1	19.8	21.5	PA&ED March 2016	YES - City Newport Beach	City of Newport Beach
12	0P190	ORA	5	13.6	13.6	Design	NO	CALTRANS
12	0P200	ORA	133	1.6	3.3	Design	NO	CALTRANS
12	0P210	ORA	5	24.8	24.8	Design	NO	CALTRANS
12	0P260	ORA	5	24.9	24.9	PA&ED Jan 2016	No	CALTRANS
12	0P330	ORA	74	6	6.4	Design	NO	CALTRANS
12	0P340	ORA	1	12.9	25.5	Design	NO	CALTRANS
12	0P460	ORA	39	3.6	7.1	PA&ED Dec 2015 overdue	No	CALTRANS
12	0P540	ORA	1	8.37	8.37	Design	NO	CALTRANS
12	0P710	ORA	1	12.9	33	Design	NO	CALTRANS
12	0P750	ORA	1	5.5	5.5	Design	NO	CALTRANS
12	0P770	ORA	55	11.7	12.1	Design	NO	CALTRANS
12	0P890	ORA	5	25	26.4	Design	NO	CALTRANS

APPENDIX E
REPORT OF HUMAN HEALTH RISK ASSESSMENTS

HUMAN HEALTH RISK ASSESSMENT

PARK, ARTS, AND RIVER CONNECTIVITY IMPROVEMENTS (PARC)
SIXTH STREET VIADUCT REPLACEMENT PROJECT
LOS ANGELES, CALIFORNIA 90023

PREPARED FOR

BLUESCAPE ENVIRONMENTAL

and

HAI HUSHMAND ASSOCIATES, INC.
GEOTECHNICAL AND EARTHQUAKE ENGINEERS

PREPARED BY:

The Fehling Group, LLC

KURT A. FEHLING
HEALTH SCIENTIST

JIM VAN DE WATER, CHG
HYDROGEOLOGIST

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LIST OF ACRONYMS

ATSDR	Agency for Toxic Substances and Disease Registry
BTEX	benzene, toluene, ethylbenzene, and xylenes
CalEPA	California Environmental Protection Agency
COPC	chemical of potential concern
CSM	conceptual site model
DTSC	Department of Toxic Substances Control
DU	data usability
EMI	Earth Mechanics, Inc.
EPC	exposure-point concentration
ESL	environmental screening level (RWQCB)
ft bgs	feet below ground surface
HAI	Hushmand Associates, Inc.
HI	hazard index
HQ	hazard quotient
HHRA	human health risk assessment
ILCR	incremental lifetime cancer risk
IRIS	Integrated Risk Information System
IUR	inhalation unit risk
J&E	Johnson & Ettinger
LACFD	Los Angeles County Fire Department
LAFD	Los Angeles Fire Department
LUTS	leaking underground tank site
$\mu g/m^3$	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
mg/kg	milligrams per kilogram
NAPL	non-aqueous phase liquid
ND	non-detect
OCP	organochlorine pesticide
OPP	organophosphorus pesticide
PARC	Park, Arts, and River Connectivity Improvements
PCB	polychlorinated biphenyl
RBC	risk-based concentration
RfC	reference concentration
RfD	reference dose
RME	reasonable maximum exposure
RSL	regional screening level (USEPA)
RWQCB	Regional Water Quality Control Board
SF	slope factor
SL	screening level (CalEPA)
SVOC	semi-volatile organic compound
TPH-GRO	total petroleum hydrocarbon – gasoline range organics
TPH-DRO	total petroleum hydrocarbon – diesel range organics
TPH-ORO	total petroleum hydrocarbon – oil range organics
UCL	upper confidence limit
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

EXECUTIVE SUMMARY

The City of Los Angeles (City) proposes to replace the existing Sixth Street Viaduct over the Los Angeles River and U.S. Route 101 (US 101) (Sixth Street Viaduct Replacement Project; hereafter referred to as "the Project"). Due to alkali-silica reaction effects, the viaduct concrete continues to degrade throughout the main structural elements, which has significantly reduced the bridge's capacity to resist earthquake loads. As part of this replacement project, the City is creating an associated greenscape area. This aspect of the project is referred to as Park, Arts, and River Connectivity Improvements (PARC) as part of the Project (**Figure 1**)[1]. A conceptual site design depicting the PARC improvements is presented in **Figure 2**.

The redevelopment area or "PARC" has been divided into several areas as noted below and are presented in **Figure 3** and **Figure 4 (Note: These figures have not been updated to reflects the findings of this HHRA)**, collectively identified as the "Site":

1. PARC Area 1A
2. PARC Area 1B
3. PARC Area 2A
4. PARC Area 2B
5. PARC Area 2C
6. PARC Area 3
7. PARC Area 4A
8. PARC Area 5
9. PARC Area 6
10. PARC Area 7
11. PARC Area 8
12. PARC Area 9
13. PARC Area 10.

These figures also show four parcels associated with cross streets as follows: 1) Parcel S1 – South Santa Fe Avenue, 2) Parcel S2 – Mission Road, 3) Parcel S3 – Anderson Street, and 4) Parcel S4

[1] Figures 1, 2, 3, and 4 are from Hushmand Associates, Inc. (HAI), 2017.

– Clarence Street. As part of the redevelopment program, this human health risk assessment (HHRA) for the residual chemicals in soil and soil gas for selected PARC areas at the Site has been completed. This HHRA is considered a "baseline" HHRA in that it addresses potential risks to human health in the absence of any mitigation. The objective of this HHRA is to quantify potential health risks for future on-site receptors due to chemicals in soil and soil gas (vapor) and evaluate whether the potential health risks warrant mitigation. The HHRA will also be used to communicate with agencies such as the Los Angeles County Fire Department (LACFD, the designated oversight agency) Site Mitigation Unit, other City of Los Angeles departments, and the public during the environmental impact review process. This HHRA addresses PARC Areas 1A, 2A, 2B, 2C, 5, 6, 7, and 8 as review of environmental data collected over the last several years indicated that these parcels likely pose the greatest potential health risks (hereafter referred to as "the Site").

This HHRA is conducted in accordance with California Environmental Protection Agency (CalEPA) and U.S. Environmental Protection Agency (USEPA) guidance. As advised by the LACFD, potential health risks associated with a residential (e.g., unrestricted land use) scenario and a construction scenario are quantified.

RESIDENTIAL SCENARIO

The incremental lifetime cancer risk (ILCR) values are below the CalEPA and USEPA *de minimis* risk target of 1E-06 or within the commonly-applied risk management range (1E-06 to 1E-04) (CalEPA 2011). Given the actual future planned use for the Site, and assuming soil gas samples anticipated to be required in PARC Area 6 yield ILCR values below the *de minimis* risk target or within the risk management range, it is our opinion that a regulatory agency would consider carcinogenic health impacts to be insignificant such that mitigative and/or remedial actions would not be required.

The noncancer hazard index (HI) exceeds the regulatory benchmark of 1.0 in all areas except PARC Area 8 primarily due to total petroleum hydrocarbons, diesel range organics (TPH-DRO). Lead exceeds its screening level for chronic daily exposure to children in a residential seeting for all areas except PARC Area 2A/2B/2C and 7. The TPH-DRO and lead exceedances are commonly driven by a limited number of samples within limited areas. Absent additional site or risk characterization or – more importantly - consideration of the conservative nature of this HHRA which includes this hypothetical receptor, it has been our experience that a regulatory agency may request mitigative and/or corrective action at these locations.

CONSTRUCTION WORKER SCENARIO

The ILCR in all PARC Areas is below the CalEPA and USEPA *de minimis* risk target of 10^{-6} and below the commonly-applied risk management target ILCR of $1x10^{-5}$. It has been our experience that a regulatory agency would consider carcinogenic health impacts to be insignificant such that mitigative and/or remedial actions would not be required.

The noncancer hazard index (HI) exceeds the regulatory benchmark of 1.0 in PARC Areas 7 and 8 primarily due to TPH-DRO. Lead exceeds its screening level in PARC Areas 1A and 6. As above for the residential receptor, the TPH-DRO and lead exceedances are commonly driven by a

limited number of samples within limited areas. Absent additional site or risk characterization or consideration of the conservative nature of this HHRA, it has been our experience that a regulatory agency may request mitigative and/or corrective action at these locations.

SUMMARY

Absent additional site or risk characterization or consideration of the conservative nature of this HHRA, it has been our experience that a regulatory agency may request mitigative and/or corrective action at a limited number of locations impacted with TPH-DRO and/or lead. It is also likely that a regulatory agency would request soil gas sampling in PARC Area 6. A tabular summary of the ILCRs and HI values are presented below with full details provided in Section 6.2.

RESIDENTIAL RECEPTOR

	ILCR (unitless)		TOTAL ILCR (unitless)	HI (unitless)		TOTAL HI (unitless)	Lead Soil EPC (mg/kg)	Comment
PARC Area	Soil	Soil Gas (Indoor Air)		Soil	Soil Gas (Indoor Air)			
1A	8E-08	-	8E-08	2E+00	-	2E+00	389	Soil HI driven by TPH-DRO; lead exceeds screening level
2A, 2B, and 2C	0E+00	9E-07	9E-07	1E+00	3E-01	2E+00	28	Soil HI driven by TPH-DRO and mercury; target organ assessment indicates no adverse noncancer health effect
5	0E+00	-	0E+00	3E+00	-	3E+00	81	Soil HI driven by TPH-DRO; lead slightly exceeds screening level
6	1E-06	-	1E-06	1E+01	-	1E+01	1839	Soil ILCR driven by Arochlor 1260; soil HI driven by TPH-DRO; lead exceeds screening level
7	2E-08	5E-06	5E-06	2E+01	3E+00	2E+01	58	Soil gas indoor air ILCR driven by PCE; soil HI driven by TPH-DRO; soil gas indoor air HI driven by TPH-DRO
8	0E+00	2E-06	2E-06	9E-02	4E-02	1E-01	130	Soil gas indoor air driven by PCE; lead exceeds screening level

CONSTRUCTION WORKER RECEPTOR

	ILCR (unitless)		TOTAL ILCR (unitless)	HI (unitless)		TOTAL HI (unitless)	Lead Soil EPC (mg/kg)	Comment
PARC Area	Soil	Soil Gas (Trench Air)		Soil	Soil Gas (Trench Air)			
1A	3E-09	-	3E-09	3E-01	-	3E-01	389	Lead exceeds screening level
2A, 2B, and 2C	0E+00	2E-08	2E-08	7E-02	2E-01	3E-01	28	-
5	0E+00	-	0E+00	3E-01	-	3E-01	81	-
6	8E-08	-	8E-08	1E+00	-	1E+00	1839	Soil HI driven by TPH-DRO; lead exceeds screening level
7	2E-10	1E-07	1E-07	2E+00	2E+00	4E+00	58	Soil HI driven by TPH-DRO; soil gas trench air HI driven by TPH-DRO
8	0E+00	2E-08	2E-08	1E-01	1E-02	2E-01	130	-

The soil risk values (which are associated with 95% UCLs for the soil COPCs) and the maximum indoor and trench air risk values (which are associated with sample-specific concentrations for the soil gas COPCs) are summarized for each PARC Area in **Table 8**.

- The ILCR values exceed the risk benchmark level only for the residential receptor in PARC Areas 6, 7, and 8 and then only slightly so. The maximum ILCR value is 5E-06 for PARC Area 7; therefore, the exceedances are within the 1E-04 to 1E-06 risk management range. The risk-driving COPCs are Aroclor 1260 in soil (PARC Area 5) and PCE in soil gas (PARC Areas 7 and 8).
- The HI values exceed the benchmark level for the residential receptor in all PARC Areas except PARC Area 8. The HI values exceed the benchmark level for the construction worker receptor in PARC Area 6 and 7 due to TPH-DRO.

- Lead exceeds the residential screening level in all PARC Areas 1A, 5, 6, and 8; it exceeds the construction worker screening level in PARC Area 1A and 6.
- TPH-DRO and lead are the primary risk-driving COPCs.

1.0 INTRODUCTION

The City of Los Angeles (City) proposes to replace the existing Sixth Street Viaduct over the Los Angeles River and U.S. Route 101 (US 101) (Sixth Street Viaduct Replacement Project; hereafter referred to as "the Project"). Due to alkali-silica reaction effects, the viaduct concrete continues to degrade throughout the main structural elements, which has significantly reduced the bridge's capacity to resist earthquake loads. As part of this replacement project, the City is creating an associated greenscape area. This aspect of the project is referred to as Park, Arts, and River Connectivity Improvements (PARC) as part of the Project (**Figure 1**)[2]. A conceptual site design depicting the PARC improvements is presented in **Figure 2**.

The redevelopment area or "PARC" has been divided into several areas as noted below and are presented in **Figure 3** and **Figure 4** (Note: These figures have not been updated to reflect the findings of this HHRA), collectively identified as the "Site":

14. PARC Area 1A
15. PARC Area 1B
16. PARC Area 2A
17. PARC Area 2B
18. PARC Area 2C
19. PARC Area 3
20. PARC Area 4A
21. PARC Area 5
22. PARC Area 6
23. PARC Area 7
24. PARC Area 8
25. PARC Area 9
26. PARC Area 10.

These figures also show four parcels associated with cross streets as follows: 1) Parcel S1 – South Santa Fe Avenue, 2) Parcel S2 – Mission Road, 3) Parcel S3 – Anderson Street, and 4) Parcel S4

[2] Figures 1, 2, 3, and 4 are from Hushmand Associates, Inc. (HAI), 2017.

– Clarence Street. As part of the redevelopment program, this human health risk assessment (HHRA) for the residual chemicals in soil and soil gas for selected PARC areas at the Site. This HHRA is considered a "baseline" HHRA in that it addresses potential risks to human health in the absence of any mitigation. The objective of this HHRA is to quantify potential health risks for future on-site receptors due to chemicals in soil and soil gas (vapor) and evaluate whether the potential health risks warrant mitigation. The HHRA will also be used to communicate with agencies such as the Los Angeles County Fire Department (LACFD, the designated oversight agency) Site Mitigation Unit, other City of Los Angeles departments, and the public during the environmental impact review process. This HHRA addresses PARC Areas 1A, 2A, 2B, 2C, 5, 6, 7, and 8 as review of environmental data collected over the last several years indicated that these parcels likely pose the greatest potential health risks (hereafter referred to as "the Site").

This HHRA is conducted in accordance with California Environmental Protection Agency (CalEPA) and U.S. Environmental Protection Agency (USEPA) guidance. As advised by the LACFD, potential health risks associated with a residential (e.g., unrestricted land use) scenario and a construction scenario are quantified.

1.1 HHRA METHODOLOGY

Human health risk assessment involves examining issues related to site-related contaminants (chemicals of potential concern [COPCs]), including environmental fate and transport, determining if sampling is sufficient to characterize COPCs and assessing the exposure of human receptors. In addition, the exposure and toxicity parameters of contaminants are evaluated to make sure that the latest scientific knowledge is used in evaluating potential risk. These evaluations are based on sound scientific knowledge and fact, and comply with CalEPA and USEPA risk assessment guidance, and policy as referenced throughout this HHRA.

At properties where no remedial action has been implemented (such as the Site), the HHRA is commonly referred to as a "baseline HHRA" and quantifies the potential risk for current and/or future human receptors using the most recent COPC concentrations available. Conversely, at properties involving remedial action, the HHRA is commonly referred to as a "post-remediation HHRA", which is used to determine the nature and extent of remedial activities, such as establishing preliminary cleanup goals and ensuring that contaminants remaining do not pose a potential risk to current and/or future human receptors.

The receptors evaluated in this HHRA include a residential child and adult and a construction worker. There receptors are assumed to have a reasonable maximum exposure (RME) by applicable exposure routes (CalEPA, 2014). The assumption of potential exposure (by any complete and/or potentially complete exposure pathway) represents a conservative (e.g., health-protective) approach. This approach is recommended by regulatory risk assessment guidance to make the HHRA sufficiently protective of the potential receptors (USEPA, 1989; CalEPA, 2015).

1.2 HHRA COMPONENTS

The HHRA process consists of four primary components as the basis for identifying potential health risks posed to current and/or future receptors at a Site (USEPA, 1989; CalEPA, 2015). These HHRA components are:

- **Data Evaluation/Chemicals of Potential Concern:** Site characterization data are evaluated for risk assessment usability and the COPCs are identified.
- **Exposure Assessment:** The routes through which potential exposure to COPCs may occur are identified. Potential human receptors are also identified and are displayed in a conceptual site model (CSM). The magnitude and duration of the receptor-specific exposures are estimated.
- **Toxicity Assessment:** Relevant toxicity endpoints and dose-response criteria are identified for the COPCs.
- **Risk Characterization:** The results of the toxicity assessment and exposure assessment are employed to estimate the incremental lifetime cancer risk (ILCR) and the noncancer hazard index (HI) for each receptor.

1.3 REPORT ORGANIZATION

The remainder of this report is organized as follows:

- **Section 2.0 — Site Background.** A site background summary, including a description of the physical setting and a summary of site characterization data, is presented.
- **Section 3.0 — Data Evaluation and Selection of Chemicals of Potential Concern.** The site data evaluation for the Site and the COPCs are presented.
- **Section 4.0 — Toxicity Assessment.** The toxicity criteria established by the regulatory agencies are identified for the COPCs along with their sources.
- **Section 5.0 — Exposure Assessment.** The exposure scenarios and pathways, exposure parameters, and exposure-point concentrations (EPCs) for the COPCs are presented
- **Section 6.0 — Risk Characterization.** The methods for estimating the potential and incremental lifetime cancer risks and noncancer hazards for the identified receptors are presented. In addition, a qualitative uncertainty analysis is provided for the major components for the HHRA.
- **Section 7.0 — Summary.** The HHRA is summarized in this section.
- **Section 8.0 — References Cited.** The references cited in the HHRA are presented.

2.0 SITE BACKGROUND

The Site is in a heavily urbanized area just east of downtown Los Angeles, is currently zoned as commercial/industrial, and as such, is surrounded by industrial and commercial properties. Based on historic sources, the Site vicinity has remained the same since the 1980s. The Los Angeles River and the rail lines have been present since the 1890s (EMI, 2014). The Site has an approximate elevation of 240 feet above mean sea level.

Figures from the Earth Mechanics, Inc. (EMI, 2014) and Hushmand Associates, Inc. (HAI, 2017) reports showing the locations of the PARC areas evaluated in this HHRA are included as **Attachment A**. As shown on the HAI figures, the Site is divided roughly in half by the Los Angeles River. The main route associated with the viaduct is named 6th Street west of the river and Whittier Boulevard east of the river. The portion of the Site west of the river contains PARC Areas 1A, 2A, 2B, and 2C whereas the portion east of the river contains PARC Areas 5, 6, 7, and 8. The Site generally runs along 6th Street / Whittier Boulevard and is bounded by Mateo Street to the west and the Santa Ana ("the 5") Freeway and the Hollywood ("the 101") Freeway to the east where they emerge from the East Los Angeles Interchange.

Comparison of the EMI and HAI figures in **Attachment A**, shows that PARC Areas 1A, 2A, 2B are within what EMI (2014) refers to as "AOC 1", PARC Areas 5, 6, and 8 are within "AOC 4", and PARC Area 7 is divided between "AOC 3" and "AOC 4". HAI (2017) further subdivides several PARC Areas into "parcels" as follows:

- Parcel 32 encompasses the eastern portion of Area 2A and all of Area 2B and is located east of Mesquit Street;
- Parcel 33 encompasses that portion of Area 2A south of Sixth Street and Area 2C;
- Parcel 20 is the northwestern portion of Area 7;
- Parcel 22 is the northeastern portion of Area 7; and
- Parcel 23 is the southeastern portion of Area 7.

2.1 REGIONAL GEOLOGY AND SITE SOILS

The Site is located within the Los Angeles Basin, an alluvial lowland bounded by the Peninsular Ranges, the Transverse Ranges, and the Pacific Ocean. The Site lies near the northeastern edge of the Basin, approximately 1.5 miles south of the Elysian Hills and approximately 15 miles east of the ocean (Arcadis, 2015). The site topography is essentially flat, and any surface drainage is

expected to occur towards the concrete-lined channel of the Los Angeles River that subdivides the Site into roughly equal halves as noted earlier.

Site soils consist of natural alluvial soil overlain in some places by up to 5 feet of silty sand/sandy silt (commonly SM soil type). In some places, these cover soils may be artificial fill. Underlying native soil consists of coarser sediments, primarily sand and gravel (commonly SP soil type). At depths starting at approximately 15 feet below ground surface (ft bgs) and ending at 50 to 65 ft bgs, the soil consists of sand, silty sand, and gravel with little fines. A zone of finer-grained sediments, generally consisting of silty sand and sandy silt, occurs at depths from approximately 50 to 65 ft bgs (Arcadis, 2015). Beneath this zone, the soil consists primarily of poorly graded sand (Dames & Moore 1991).

2.2 REGIONAL AND SITE HYDROGEOLOGY

The Site is in the central groundwater basin of the surrounding coastal plain of Los Angeles County, near the northern end of the western branch of the Gaspur aquifer. The Gaspur aquifer is formed from ancestral Los Angeles River deposits and extends approximately 2 miles in width from the Los Angeles Narrows south to about 1 mile east of Compton, where it forms a continuous groundwater conduit from the recharge areas to the ocean (Dames & Moore 1991; Avocet 2013 as cited by McDaniel Lambert, 2014). Groundwater at the neighboring former BASF Inmont facility occurs at depths ranging from 56 and 75 ft bgs, while groundwater flow is to the west in the northern portion of the Site and to the southwest in the southern portion of the Site (Avocet 2008).

2.3 ENVIRONMENTAL CHARACTERIZATION HISTORY

The EMI figure included in **Attachment A** shows blue-bordered areas on either side of Sixth Street to be leaking underground tank sites (LUTS). The LUTS to the north at 590 South Santa Fe Avenue has been the subject of numerous investigations, remedial activities, and an HHRA and is referred to as "BASF Inmont" (Dames & Moore, 1985) – at which paints and lacquer were manufactured, "Former BASF Coatings and Colorants Division Facility" (Dames & Moore, 1991), "Sun Chemical Corporation" (ERM, 1997a and 1997b), and the "Former Butterfield Property" (Arcadis, 2015). Investigations at the 590 South Santa Fe Avenue property documented that past commercial use of the property and surrounding area resulted in groundwater and soil contamination (McDaniel Lambert, 2014 and references cited therein). Contamination at the property is primarily associated with nonaqueous phase liquid (NAPL) at the interface of the saturated and unsaturated zones, which is believed to have resulted from releases from underground storage (UST) areas. The two UST areas included 11 solvent tanks with a combined capacity of approximately 56,000 gallons, and six USTs were removed in 1986 while five were abandoned in place (Avocet 2008 and 2013). While a variety of chemicals were used at the property, the primary contaminants are mostly related to volatile organic compounds (VOCs), especially benzene, toluene, ethylbenzene, and xylenes (BTEX) in groundwater, while benzene and toluene and high molecular weight petroleum hydrocarbons were detected most frequently in soil, and a variety of VOCs including chlorinated compounds, were detected in soil gas (Avocet 2013 and 2014). Hydrogeologic cross-sections and plan-view figures showing the extent of contamination from Arcadis (2015) are included as **Attachment B**. In accordance with the CalEPA-approved workplan (Arcadis, 2015), several USTs and shallow impacted soils were

excavated in 2016 (Arcadis, 2016). This removal resulted in CalEPA approval of the property to be redeveloped for commercial use (CalEPA, 2016). While that workplan also proposed in situ chemical oxidation (ISCO), review of documents posted on the Envirostor website[3] give no indication that ISCO has been implemented.

Given the history of the area along with the known conditions at the 590 Santa Fe Avenue property and the planned redevelopment of the area, Phase I reports were prepared for parcels:

- covering the southern portion of PARC Area 2A and all of PARC Area 2C (600 South Santa Fe Avenue, see figure included as **Attachment C** from CH2M-Hill, 2013a);
- covering all of PARC Area 2B (in addition to an additional area to the south) (658 Mesquit Street, see figure included as **Attachment D** from CH2M-Hill, 2013b);
- covering the easternmost portion of PARC Area 6 (1600 East 6th Street, see figure included as **Attachment E** from CH2M-Hill, 2013c); and
- covering all of PARC Area 8 (650 South Clarence Street, see figure included as **Attachment F** from CH2M-Hill, 2013d).

For the 600 South Santa Fe Avenue parcel, lube oil was stored and a facility immediately to the south had oil drums; therefore, a Phase II investigation at these locations or immediate to these two locations was recommended (CH2M-Hill, 2013a). Because both the 600 South Santa Fe Avenue and 658 Mesquit Street parcels are within 500 feet of the 590 South Santa Fe Avenue property detailed above and associated groundwater impacts, it was recommended that the groundwater impact from that property be considered during future construction activities (CH2M-Hill, 2013a,b). For the 1600 East 6th Street parcel, in addition to the 590 South Santa Fe Avenue property within 0.5 miles to the west, certain portions of the parcel were found to have asbestos-containing material. For the 650 South Clarence Street parcel, in addition to the 590 South Santa Fe Avenue property within 0.5 miles to the west, the nearby Bell Craft Furniture facility was reported to contain a spray booth and therefore the potential for VOCs was noted.

Review of CalEPA's Geotracker and Envirostor website repositories also identified the 590 South Santa Fe parcel. Additionally, the Envirostor website repository identified the property at 555 South Mateo Street immediately east of the Site across Mateo Street and north of 6th Street (see figure included as **Attachment G** from Kleinfelder, 2015). Diesel- and oil-range total petroleum hydrocarbons (TPH-DRO and TPH-ORO, respectively) impacted soil were addressed through a removal action that involved excavation and off-site disposal of 104 cubic yards of impacted soil. Confirmation sampling was acceptable and qualified the Site for unrestricted land use as documented in the 'no further action determination' issued by the CalEPA Department of Toxic Substances Control (DTSC, 2016).

As part of their investigation, EMI (2014) conducted a review of City of Los Angeles Fire Department (LAFD) underground storage tank records. This review revealed six addresses in

[3] http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=19281223

addition to the 590 South Santa Fe Avenue parcel discussed above. USTs at five of the six properties had been abandoned or otherwise removed with LAFD oversight. The remaining parcel (Superior Trucking, 601 Mission Road) contains one 1,200-gallon waste oil UST and one 1,200-gallon new oil UST. The maximum total petroleum hydrocarbon (TPH) concentration was reported at 5,700 milligrams per kilogram (mg/kg).

Given the findings at the 590 Santa Fe Avenue property, those provided by CH2M-Hill and other investigators at other nearby properties, and the presence of known or suspected features at the various PARC Area parcels, supplemental environmental investigations were conducted by Earth Mechanics, Inc. (EMI, 2014) and HAI (HAI, 2017) throughout the Site. The data provided in these reports are the primary data used in this HHRA and are summarized below.

2.4 HHRA DATASET

This section presents the data reported by EMI (2014) and HAI (2017) that is used as the basis for this HHRA. The HHRA datasets for each PARC Area consist of soil samples, soil gas samples, and/or ambient air samples[4] specific to each PARC Area as warranted based on operational history.

Soil samples were submitted to State-certified laboratories[5] for various analyses as warranted based on operational history including:

- metals using EPA Methods 6010B/7471A;
- TPH-GRO, TPH-DRO, and TPH-ORO[6] using EPA Method 8015 (modified);
- VOCs[7] using EPA Method 8260B;
- SVOCs[8] using EPA Method 8270C;
- PCBs[9] using EPA Method 8082;
- OCPs[10] and OPPs[11] using EPA Method 8081; and
- chlorinated herbicides using EPA Method 8151A.

[4] The EMI investigation data used in this HHRA is limited to soil data whereas the HAI investigation data includes soil, soil gas, and ambient air data.

[5] American Analytics, Chatsworth, California for the EMI investigation and Advanced Technology Laboratories, Signal Hill, California for the HAI investigation.

[6] TPH-GRO = Total petroleum hydrocarbons – gasoline range organics; TPH-DRO = Total petroleum hydrocarbons – diesel range organics; TPH-ORO = Total petroleum hydrocarbons – oil range organics.

[7] VOCs = volatile organic compounds.

[8] SVOCs = semi-volatile organic compounds.

[9] PCBs = polychlorinated biphenyls.

[10] OCPs = organochlorine pesticides.

[11] OPPs = organophosphorus pesticides.

Soil gas and ambient air samples were submitted to a State-certified laboratory (Advanced Technology Laboratories, Signal Hill, California) for analysis as warranted based on operational history as follows:

- VOCs using EPA Method TO-15; and
- TPH-GRO using EPA Method TO-3.

The data summary tables are presented in attachments specific to each PARC Area as follows:

- Attachment H: PARC Area 1A;
- Attachment I: PARC Area 2A, 2B, and 2C;
- Attachment J: PARC Area 5;
- Attachment K: PARC Area 6;
- Attachment L: PARC Area 7; and
- Attachment M: PARC Area 8.

For the sake of uniformity, the chemicals listed in these tables for both the soil and soil gas/ambient air samples are identical for all PARC Areas even though they may not have been tested and/or detected in a given PARC Area.

2.4.1 Soil

This subsection presents the soil data collected in the upper 10 feet for each PARC Area. Although soil samples were collected from depths exceeding 10 feet, only those samples in the upper 10 feet are used as it is assumed that the receptors considered in this HHRA would come into contact only with these shallow soils. Details are provided in the Conceptual Site Model section of this HHRA.

2.4.1.1 PARC Area 1A

Soil samples in this area were collected from borings IA-1 through IA-4, L7, L8, L-11, and L-12. The locations of these eight borings are shown on the figures included in **Attachment A**.

The soil data are summarized in **Attachment H** as follows:

- **Table H-1** (metals, including hexavalent chromium); and
- **Table H-2** (TPH-GRO, TPH-DRO, VOCs, SVOCs, PCBs, and OCPs ['non-metals']).

At least one sample from all borings was analyzed for metals whereas at least one sample from L7, L8, L-11, and L-12 were analyzed for non-metals. No samples from IA-1 through IA-4 were analyzed for non-metals.

As shown in the summary table for metals (**Table H-1**), all metals analyzed were detected in at least one sample except for beryllium, selenium, silver, and thallium. The concentrations for barium, copper, lead, mercury, and zinc suggest the possibility of a release whereas concentrations of the remaining metals appear to be associated with naturally-occurring or otherwise anthropogenic non-site-related background levels as further discussed in **Section 3**.

As shown in the summary table for the non-metals (**Table H-2**), TPH-DRO, the PCB Aroclor 1260, and the OCP 4,4'-DDT[12] were detected in L-12 at 2 ft bgs. TPH-DRO was also detected in L-7 at 1 ft bgs. The remaining tested non-metals (i.e., TPH-GRO, VOCs, and SVOCs) were not detected in any samples.

2.4.1.2 PARC Area 2A, 2B, and 2C

Soil samples in this area were collected from borings R-13-02, R-13-19 through R-13-21, 2A-1, 2A-2, P33-B1 through P33-B4, P32-B1, P32-B2, and RR-B1 through RR-B3. The locations of these fifteen borings – ten of which were in PARC Area 2A, two of which were in PARC Area 2B, one of which was in PARC Area 2C, and two of which were between the three PARC Areas - are shown on the figures included in **Attachment A**.

The soil data are summarized in **Attachment I** as follows:

- **Table I-1** (metals); and
- **Table I-2** (TPH-GRO, TPH-DRO, TPH-ORO, VOCs, SVOCs, PCBs, and OCPs ['non-metals']).

At least one sample from all borings was analyzed for metals and at least one of the non-metals.

As shown in the summary table for metals (**Table I-1**), all metals analyzed were detected in at least one sample except for antimony, molybdenum, selenium, silver, and thallium. The concentrations for barium, copper, lead, mercury, and zinc suggest the possibility of a release whereas concentrations of the remaining metals appear to be associated with naturally-occurring or otherwise anthropogenic non-site-related background levels as further discussed in **Section 3**.

As shown in the summary table for the non-metals (**Table I-2**), TPH-GRO, TPH-DRO, and TPH-ORO were detected in a limited number of samples. The remaining tested non-metals (i.e., VOCs, SVOCs, PCBs, OCPs, OPPs, and chlorinated herbicides) were not detected in any samples.

2.4.1.3 PARC Area 5

Soil samples in this area were collected from borings 5-1, 5-2, L-9, and L-10. The locations of these four borings are shown on the figures included in **Attachment A**.

The soil data are summarized in **Attachment J** as follows:

- **Table J-1** (metals); and
- **Table J-2** (TPH-GRO, TPH-DRO, VOCs, SVOCs, and chlorinated herbicides ['non-metals']).

[12] DDT = Dichlorodiphenyltrichloroethane.

At least one sample from all borings was analyzed for metals and selected samples from L-9 and L-10 were analyzed for the non-metals.

As shown in the summary table for metals (**Table J-1**), all metals analyzed were detected in at least one sample except for beryllium, cadmium, selenium, silver, and thallium. The concentrations for lead and zinc suggest the possibility of a release whereas concentrations of the remaining metals appear to be associated with naturally-occurring or otherwise anthropogenic non-site-related background levels as further discussed in **Section 3**.

As shown in the summary table for the non-metals (**Table J-2**), TPH-DRO was detected in both samples in which it was tested. The remaining tested non-metals (i.e., TPH-GRO, VOCs, SVOCs, and chlorinated herbicides) were not detected in any samples.

2.4.1.4 PARC Area 6

Soil samples in this area were collected from borings 16-1 through 16-10, L-5, L-6, 18.1-GP-1 through 18.1-GP-3, 18.1-1 through 18.1-7, 18.1-4A through 18.1-4D, A-13-08 through A-13-10, and A-13-12. The locations of these thirty borings are shown on the figures included in **Attachment A**.

The soil data are summarized in **Attachment K** as follows:

- **Table K-1** (metals, including hexavalent chromium); and
- **Table K-2** (TPH-GRO, TPH-DRO, TPH-ORO, VOCs, SVOCs, PCBs, OCPs, and chlorinated herbicides ['non-metals']).

At least one sample from all borings was analyzed for metals. At least one sample from all borings, except for 6-6 through 6-8, L5, and 18.1-GP-2, were analyzed for the non-metals. It is noted that, based on information provided by the City, impacted soils at 18.1-7 and 18.1-GP-3 have been excavated to a depth of at least 1 ft bgs.

As shown in the summary table for metals (**Table K-1**), all metals analyzed were detected in at least one sample except for thallium. The concentrations for antimony, arsenic, barium, cadmium, copper, lead, mercury, nickel, selenium, silver, and zinc suggest the possibility of a release whereas concentrations of the remaining metals appear to be associated with naturally-occurring or otherwise anthropogenic non-site-related background levels as further discussed in **Section 3**.

As shown in the summary table for the non-metals (**Table K-2**), TPH-GRO, TPH-DRO, TPH-ORO, and VOCs were detected in numerous samples. The remaining tested non-metals (i.e., SVOCs, PCBs, OCPs, and chlorinated herbicides) were not detected in any samples.

2.4.1.5 PARC Area 7

Soil samples in this area were collected from borings 7-1 through 7-7, L-2 through L-4, 20-1, A-13-14, and A-13-15. The locations of these thirteen borings are shown on the figures included in **Attachment A**.

The soil data are summarized in **Attachment L** as follows:

- **Table L-1** (metals); and
- **Table L-2** (TPH-GRO, TPH-DRO, TPH-ORO, VOCs, SVOCs, PCBs, OCPs, and chlorinated herbicides ['non-metals']).

At least one sample from all borings was analyzed for metals and non-metals.

As shown in the summary table for metals (**Table L-1**), all metals analyzed were detected in at least one sample except for antimony, beryllium, and thallium. The concentrations for barium, copper, lead, mercury, and zinc suggest the possibility of a release whereas concentrations of the remaining metals appear to be associated with naturally-occurring or otherwise anthropogenic non-site-related background levels as further discussed in **Section 3**.

As shown in the summary table for the non-metals (**Table L-2**), TPH-GRO, TPH-DRO, TPH-ORO, and VOCs were detected in at least one sample. The remaining tested non-metals (i.e., SVOCs, PCBs, OCPs, and chlorinated herbicides) were not detected in any samples.

2.4.1.6 PARC Area 8

Soil samples in this area were collected from borings 8-1 through 8-3, L-1, and A-13-17. The locations of these five borings are shown on the figures included in **Attachment A**.

The soil data are summarized in **Attachment M** as follows:

- **Table M-1** (metals, including hexavalent chromium); and
- **Table M-2** (TPH-GRO, TPH-DRO, TPH-ORO, VOCs, SVOCs, PCBs, OCPs, and chlorinated herbicides ['non-metals']).

At least one sample from all borings was analyzed for all metals and non-metals, except 8-1 and 8-2, which were analyzed exclusively for lead.

As shown in the summary table for metals (**Table M-1**), all metals analyzed were detected in at least one sample except for beryllium, hexavalent chromium (analyzed in one sample from 8-3), molybdenum, silver, and thallium. The concentrations for barium, copper, lead, and zinc suggest the possibility of a release whereas concentrations of the remaining metals appear to be associated with naturally-occurring or otherwise anthropogenic non-site-related background levels as further discussed in **Section 3**.

As shown in the summary table for the non-metals (**Table M-2**), TPH-GRO was the only detected compound. The remaining tested non-metals (i.e., TPH-DRO, TPH-ORO, VOCs, SVOCs, PCBs, OCPs, and chlorinated herbicides) were not detected in any samples.

2.4.2 Soil Gas

This subsection presents the soil gas data for each PARC Area. The soil gas data used for this HHRA were obtained by HAI (2017). Soil gas and/or ambient air samples were collected in PARC

Areas 2A, 2B, 2C, 6, 7, and 8. That is, neither soil gas nor ambient air samples were collected in PARC Areas 1A and 5.

2.4.2.1 PARC Area 1A

Neither soil gas nor ambient air samples were collected in this PARC Area.

2.4.2.2 PARC Area 2A, 2B, and 2C

Soil gas samples were collected in August 2015, November 2016, and May 2017 and an ambient air sample in May 2017. As shown on the figure included in **Attachment A**, soil gas samples were collected from 33 probes – twelve of which were in PARC Area 2A, eleven of which were in PARC Area 2B, two of which were in PARC Area 2C, and eight of which were between the three PARC Areas. In addition to the soil gas samples, one ambient air sample was collected in PARC Area 2A.

As shown in the summary table (**Table I-3**), which shows only those analytes that were detected in at least one sample given the extensive number of analytes associated with TO-15, the most frequently detected analytes were as follows:

- 2-Propanol;
- Ethanol;
- TPH-GRO;
- Acetone;
- Toluene;
- Tetrachloroethene (PCE);
- 2-Butanone (MEK);
- 1,1,1-Trichloroethane (1,1,1-TCA);
- m,p-Xylene;
- Trichlorofluoromethane (TCFM, Freon 11);
- o-Xylene;
- Ethylbenzene; and
- Dichlorodifluoromethane (DCDFM, Freon 12).

2.4.2.3 PARC Area 5

Neither soil gas nor ambient air samples were collected in this PARC Area.

2.4.2.4 PARC Area 6

An ambient air sample was collected in May 2017. As shown in the summary table (**Table K-3**), the following compounds were detected in this sample:

- 2-Butanone (MEK);
- Acetone; and
- Carbon disulfide.

2.4.2.5 PARC Area 7

Soil gas samples were collected in November 2013, August 2015, April 2016, and May 2017. An ambient air sample was collected in November 2013 and another was obtained in May 2017. As shown on the figure included in **Attachment A**, soil gas samples were collected from 37 probes.

As shown in the summary table (**Table I-3**), which shows only those analytes that were detected in at least one sample given the extensive number of analytes associated with TO-15, the most frequently detected analytes were as follows:

- Tetrachloroethene (PCE);
- Trichlorofluoromethane (TCFM, Freon 11);
- TPH-GRO;
- Toluene;
- m,p-Xylene;
- 2-Butanone (MEK);
- Acetone; and
- Carbon Disulfide.

2.4.2.6 PARC Area 8

The soil gas sample and associated duplicate sample was collected in May 2017 at the location shown on the figure included in **Attachment A**. Results for the primary sample were not provided; therefore, the results for the duplicate sample are listed in the summary table (**Table M-3**), which shows only those analytes that were detected in at least one sample given the extensive number of analytes associated with TO-15. The detected analytes were as follows:

- Acetone;
- Benzene;
- Carbon disulfide;
- 1,1-Dichloroethene (1,1-DCE);
- Tetrachloroethene (PCE);
- Toluene;
- Trichloroethene (TCE);
- 2-Butanone (MEK);
- 1,1,1-Trichloroethane (1,1,1-TCA);
- m,p-Xylene;
- Trichlorofluoromethane (TCFM, Freon 11); and
- o-Xylene.

2.4.3 Soil Physical Parameters

Soil physical parameters (SPPs), which include dry bulk density, moisture content, and porosity, are used in exposure assessment models used to calculate exposure point concentrations as presented in the Exposure Assessment (**Section 5**). The SPPs for all PARC Areas are listed in **Table 1**. The exposure assessment models are generally most sensitive to moisture content, which

must commonly be converted to water-filled porosity for use in the exposure assessment models. To derive a representative average water-filled porosity, the 95% upper confidence limit (UCL) of the mean air saturation is calculated using USEPA guidance (USEPA, 2015). Given the definition of air saturation as (1 – saturation) / porosity, where saturation = water-filled porosity / porosity, use of the 95% UCL of the air saturation yields a conservative (low) estimate of water-filled porosity. The SPPs used in the exposure assessment models are listed at the bottom of **Table 1** and are as follows:

- Dry bulk density: 1.913 grams per cubic centimeter (g/cm^3);
- Water-filled porosity: 0.075 cm^3/cm^3; and
- Porosity: 0.311 cm^3/cm^3.

3.0 DATA EVALUATION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

This section of the HHRA describes how the site characterization data were evaluated for HHRA usability and presents the methods used for the selection of chemicals of potential concern (COPCs). As noted in the previous section, the data used in this HHRA were collected through investigations conducted by EMI (EMI, 2014) and HAI (HAI, 2017). The soil and soil gas data used in this HHRA is provided in **Attachment H** through **Attachment M**. The figures included in **Attachment A** shows the locations of the soil and soil gas samples used in the HHRA.

3.1 DATA USABILITY EVALUATION

The data usability (DU) evaluation was conducted for both the soil matrix and soil vapor data used in the HHRA using the *Guidance for Data Usability in Risk Assessment* (USEPA, 1992). The DU evaluation provides the basis for (1) identifying whether there are site characterization data gaps and (2) supporting the uncertainty analysis portion of the HHRA with respect to the selection of COPCs and exposure point concentrations, both of which are dependent on the site data (USEPA, 1989, 1992).

USEPA has established a specific guidance framework to provide risk assessors a consistent basis for making decisions about the minimum quality and quantity of environmental analytical data that are sufficient to support HHRA-based decisions (USEPA, 1992). The USEPA DU guidance provides an explicit set of data quality criteria that are used to determine the usability of site characterization data in the HHRA process. These USEPA criteria are, and are addressed, as follows:

- **Criterion I — Reports:** ***Confirmation that report(s) relied upon are complete and appropriate for use in the HHRA.*** The soil and soil gas investigation data documented in EMI (2014) and HAI (2017) provide the data necessary for use in this HHRA. The EMI investigation focused on potential source areas identified through review of Phase I reports and review of LAFD UST files. The HAI investigation effectively supplemented the EMI based on a site characterization data gap analysis except for soil gas in PARC Area 6, where only an ambient air sample has been collected and elevated VOC concentrations in soil were measured – notably TCE in sample 18.2-1-1 at 11 mg/kg. It is noted that the laboratory reports for the P20, P22, and P23 soil gas samples for PARC Area 7 were not available; therefore, these data were acquired from summary tables provided in the HAI (2017). As such, with the exception of soil gas in PARC Area 6, Criterion I has been met.

- **Criterion II — Documentation:** ***Confirmation that each analytical result is associated with a specific sample location and that the appropriate sampling procedure is documented.*** Soil and soil gas sample locations used for this HHRA are presented in the figures included in **Attachment A** and the sampling procedures are documented in EMI (2014) and HAI (2017). As such, Criterion II has been met.

- **Criterion III — Data Sources:** ***Confirmation that the analytical methods used are appropriate to identify the COPCs for the media of interest.*** As discussed in the EMI (2014) and HAI (2017) reports and summarized in **Attachment H** through **Attachment M** of this HHRA, a broad analytical suite using EPA methods with extensive analyte lists, including TPH-GRO, TPH-DRO, TPH-ORO, metals, VOCs, SVOCs, PCBs, OCPs, OPPs, and chlorinated herbicides sufficiently captured all potential chemical contaminants at the Site. As such, Criterion III has been met.

- **Criterion IV — Analytical Methods and Detection Limits:** ***Confirmation that analytical methods appropriately identify the chemical form or species and that the sample detection limit is at or below a concentration appropriate for the risk assessment application.*** All detection limits for soil and soil gas samples have been confirmed to be less than applicable human health screening levels (or at low levels consistent with the capabilities of current analytical methods), and appropriate USEPA laboratory methods were employed by California state-certified laboratories. As such, Criterion IV has been met.

- **Criterion V — Data Review:** ***Confirmation that the quality of analytical results is assessed by a professional knowledgeable in field collection procedures and analytical chemistry and that data quality are adequate to estimate exposure concentrations.*** The DU evaluation was conducted by staff scientists of The Fehling Group, LLC, qualified and experienced in the DU process. As such, Criterion V has been met.

- **Criterion VI — Data Quality Indicators:** ***Documentation that sampling and analysis data quality indicators (including precision, accuracy, holding time, representativeness, completeness, and comparability) are evaluated using criteria specific to the risk assessment.*** Results of duplicate samples indicate that precision is acceptable for the HHRA. It is noted that the higher of the concentrations reported for primary and duplicate samples are used and/or both results are evaluated independently as if they were separate samples. The results of internal laboratory standards and quality control samples indicate that accuracy is acceptable for the HHRA. Holding times for all analyses were met in accordance with the EPA method used. The combined dataset obtained by EMI (2014) and HAI (2017) provides an extensive dataset with sufficient lateral and vertical coverage; therefore, the HHRA dataset is representative and complete. The datasets are comparable in that the laboratory methods reported in EMI (2014) and HAI (2017) are sufficiently consistent and a consistent set of concentration units was obtained for the multiple phases of the HAI investigation. As such, Criteria VI has been met.

In summary, the dataset is sufficient with the exception that soil gas data are not available for PARC Area 6.

3.2 SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Chemicals of potential concern (COPCs) were selected to ensure that the risk assessment focuses on those chemicals that are site related and could significantly contribute to overall site risk (USEPA, 1989). All chemicals detected in at least one soil sample were retained as soil COPCs. Similarly, all chemicals detected in at least one soil gas sample were retained as soil gas COPCs. The exception to this approach for selecting COPCs was for naturally-occurring metals which, when detected at concentrations indicative of their respective regional or site background threshold value (BTV) as described in the following subsection, were not retained as COPCs.

3.2.1 Metals

Most metals are naturally occurring and are therefore detected in most soils. Therefore, the presence of metals in soil is not necessarily indicative of a site-related anthropogenic release/operational source. The subsections that follow address the presence of metals in this regard with special consideration given to arsenic and lead.

3.2.1.1 Arsenic

Of all the metals detected at the Site, only arsenic has an established regional BTV for Southern California. The arsenic BTV for Southern California (12 mg/kg) is based on work conducted by DTSC personnel using arsenic concentrations in soil collected from school sites in Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties.[13] The maximum arsenic concentrations in soil for each PARC Area are as follows:

- PARC Area 1A: 8.8 mg/kg;
- PARC Area 2A, 2B, 2C: 6 mg/kg;
- PARC Area 5: 5 mg/kg;
- PARC Area 6: 26 mg/kg;
- PARC Area 7: 3.6 mg/kg; and
- PARC Area 8: 4.3 mg/kg.

Given these maximum concentrations, arsenic is a COPC only in PARC Area 6. More specifically, inspection of **Table K-1** in **Attachment K** shows that the only samples for which arsenic exceeds the 12 mg/kg regional BTV are:

- 6-4 at 1 ft bgs (26 mg/kg);
- L-6 at 2 ft bgs (26 mg/kg);
- L-6 at 3 ft bgs (17 mg/kg);
- 18.1-4B at 1 ft bgs (14 mg/kg);
- 18.1-4C at 1 ft bgs (13 mg/kg);

[13] https://dtsc.ca.gov/upload/Background-Arsenic.pdf (Chernoff, G., Bosan, W., and D. Oudiz [DTSC, undated]. Determination of a Regional Southern California Background Arsenic Concentration in Soil).

- 18.2-1 at 1 ft bgs (16 mg/kg); and
- 18.2-2 at 3.5 ft bgs (17 mg/kg).

These samples are co-located with elevated lead concentrations as discussed in the following subsection.

3.2.1.2 Lead

Lead is unique in risk assessment in that exposure to lead is addressed via an internal marker of exposure; that of a blood lead concentration. That is, it is considered apart from the COPCs and is not included in the calculation of cumulative risk values.

CalEPA guidance indicate that site related exposures should result in no more than 1 microgram per deciliter (µg/dL) at the 90th percentile for the exposed population. To facilitate this, the CalEPA has developed a blood lead model (LeadSpread8), to determine "safe" levels of lead in soil at residential and industrial sites (CalEPA, 2011a). Using this model, the CalEPA has established a screening level for residential soils of 80 mg/kg, respectively (CalEPA, 2009). That is, lead concentrations exceeding 80 mg/kg may pose an adverse health risk to residential receptors.

Inspection of the summary tables in **Attachment H** through **Attachment M** shows that including lead as a COPC is warranted for all PARC Areas considered in this HHRA as the maximum value in each area exceeds 80 mg/kg as follows:

- PARC Area 1A maximum lead concentration: 860 mg/kg;
- PARC Area 2A, 2B, 2C maximum lead concentration: 170 mg/kg;
- PARC Area 5 maximum lead concentration: 180 mg/kg;
- PARC Area 6 maximum lead concentration: 16,100 mg/kg;
- PARC Area 7 maximum lead concentration: 240 mg/kg; and
- PARC Area 8 maximum lead concentration: 310 mg/kg.

3.2.1.3 Other Metals

In addition to arsenic and lead, soil samples were analyzed for 15 other metals and, in limited instances, hexavalent chromium[14]. The remaining metals are addressed using CalEPA guidance (CalEPA, 1997). That is, those metals with a range greater than one order-of-magnitude and/or a coefficient of variation greater than 1 are retained as COPCs. The metals COPCs for each PARC Area are summarized in **Table 2**.

[14] Samples from PARC Areas 1A, 6, and 8 were tested for hexavalent chromium.

3.2.2 Non-Metals

The non-metals COPCs are those detected in at least one soil or soil gas sample as listed in the summary tables in **Attachment H** through **Attachment M**. The non-metals soil COPCs are summarized in **Table 3** whereas the soil gas COPCs are summarized in **Table 4**.

4.0 TOXICITY ASSESSMENT

This step of the HHRA consists of identifying the relevant toxicity endpoints and appropriate toxicity criteria for each COPC. The methods used to establish the toxicity criteria to evaluate potential chronic (long-term) carcinogenic and noncarcinogenic health impacts are discussed separately in the following sections.

Potential acute risks, such as that potentially posed by methane and hydrogen sulfide gas, are not evaluated in this HHRA. Test results for these gases are discussed in EMI (2014) and HAI (2017). Additionally, the potential health risk associated with potential exposure to asbestos-containing materials (ACM; e.g., as reported in CH2M-Hill, 2013c) is not evaluated in this HHRA. Further, ACM has been reported at 590 South Sante Fe Avenue but would be the responsibility of the LA Metropolitan Transit Authority and is not located on PARC property.

4.1 HIERARCHY OF SOURCES

CalEPA / DTSC HERO HHRA Note 3 (CalEPA, 2018) was the primary source of toxicity criteria. In those cases where this source did not provide toxicity criteria, those used by the San Francisco Regional Water Quality Control Board (RWQCB) to develop their Environmental Screening Levels (ESLs) were used (RWQCB, 2016). Finally, in those cases where neither of these sources provided toxicity data, those used by the USEPA to develop their Regional Screening Levels (RSLs) were used (USEPA, 2017a).

4.2 NONCARCINOGENIC HEALTH EFFECTS

The potential for noncancer health effects from chronic exposures (i.e., greater than 7 years) are evaluated by comparing the estimated daily exposure with a reference dose (RfD) for oral and dermal exposure routes, and a reference concentration (RfC) for the inhalation exposure route. Chronic toxicity values represent average daily exposure levels at which no adverse health effects are expected to occur under chronic exposure scenarios and are expressed in units of milligrams per kilogram per day (mg/kg-day) for the RfD, and micrograms per cubic meter ($\mu g/m^3$) for the RfC (CalEPA) or milligrams per cubic meter (mg/m^3) (USEPA). The RfDs and RfCs for the soil COPCs and RfCs for the soil gas COPCs for the vapor intrusion exposure pathway are accounted for through use of risk-based screening levels as presented in the Exposure Assessment (**Section 5**).

4.3 CARCINOGENIC HEALTH EFFECTS

To assess carcinogenic health effects, cancer slope factors (SFs) are used for oral and dermal exposures, while inhalation unit risks (IURs) are used for inhalation exposures for the soil COPCs. SFs and IURs are upper-bound estimates of the carcinogenic potency of chemicals. The SF is expressed as risk per dose $(mg/kg\text{-}day)^{-1}$, and the IUR is expressed as risk per air concentration $(\mu g/m^3)^{-1}$. These toxicity criteria are used to estimate the incremental risk of developing cancer, corresponding to a lifetime of exposure at the concentrations described in the exposure assessment. In standard risk assessment procedures, estimates of carcinogenic potency reflect the conservative assumption that no threshold exists for carcinogenic effects (i.e., that any exposure to a carcinogenic chemical will contribute an incremental amount to an individual's overall risk of developing cancer) (USEPA, 1986, 1989). The SFs and IURs for the soil COPCs and the IURs for the soil gas COPCs for the vapor intrusion exposure pathway are accounted for through use of risk-based screening levels as presented in the Exposure Assessment (**Section 5**).

5.0 EXPOSURE ASSESSMENT

Exposure assessment is the process of measuring or estimating the intensity, frequency, and duration of human exposure. The amount of chemical contacted is termed "potential dose." Potential dose is determined by incorporating assumptions regarding the contact rate with the outer boundary of a human. In the HHRA process, actual exposure cannot be determined; accordingly, a conservative hypothetical exposure is assumed and evaluated based on default regulatory guidance for estimating the potential dose.

This section identifies the exposure scenarios, receptors, and complete and potentially complete exposure pathways and presents them in the form of a conceptual site model (CSM).[15] The COPC-specific risk-based concentrations and media-specific exposure point concentrations are also presented.

5.1 EXPOSURE SCENARIOS

Areas beneath and adjacent to the Sixth Street Viaduct will be redeveloped for use as "greenspace" and as such, may include walking and bike paths as well as recreational areas. It is our understanding that permanent residential or industrial buildings will not be constructed, but restrooms and small outdoor merchant kiosks/concession stands may be present. It is recognized that other receptors may be present at the Site including maintenance workers and commercial workers. However, a residential land use scenario is recognized by most regulatory agencies to be one of the most conservative (e.g., health protective) and consistent with an "unrestricted" land use. Thus, should *de minimis* (e.g., minor or negligible and thus 'acceptable' by regulatory standards) health risks be demonstrated under the residential land use scenario, then it is almost assured that the potential health risks associated with maintenance and commercial workers would be acceptable. This also applies to off-site receptors given that their exposures to on-site chemicals would also be less than an on-site residential receptor.

Given that the intent of the redevelopment is to provide an attractive open space for local residents and workers, adult and child receptors will be evaluated. The potential receptors will also include adult construction workers (those constructing the PARC facilities). It is appropriate to address

[15] The term 'conceptual exposure model' is also commonly used.

construction workers as well as their contact with soil is often greater than that of a residential scenario. In addition, the generation of and subsequent inhalation of dust particulates during construction activities is generally also greater than other land use scenarios.

Both receptors (i.e., residential and construction worker) are assessed using the reasonable maximum exposure (RME) approach. The RME, as defined by USEPA, is the "highest exposure that is reasonably expected to occur" and is estimated by using a combination of upper-bound values and average values for the exposure parameters (USEPA, 1989). The RME approach of assessing exposure relies on conservative assumptions for the exposure parameters, to ensure that the calculated dose is not underestimated.

5.2 CONCEPTUAL SITE MODEL AND POTENTIAL EXPOSURE PATHWAYS

The identification of exposure pathways, environmental media of interest (i.e., exposure points), and chemicals of potential concern (COPCs) as well as the potentially exposed populations is supported by the CSM (USEPA, 1988, 1989). The CSM examines the migration and distribution of potential chemical constituents from release, transport and ultimately to a point of exposure with receptor populations. The CSM for the Site is shown in **Figure 5**. For the CSM, complete and potentially complete exposure pathways were identified based on the following criteria (USEPA, 1989):

- A source and mechanism for chemical release;
- An environmental transport medium (i.e., air, water, soil);
- A point of potential human contact with the medium; and
- A route of exposure (e.g., inhalation, ingestion, dermal contact).

As presented in **Figure 5**, the potential routes of exposure include:

- Inhalation of VOC vapors in indoor air (residential receptor);[16]
- Inhalation of VOC vapors in outdoor air during trenching activities (construction worker only);
- Inhalation of wind-eroded soil particulates in outdoor air (non-VOCs only);
- Dermal contact with soil (non-VOCs only);[17] and
- Incidental ingestion of soil.

Although leaching to groundwater may occur, it is our understanding that groundwater will not be used as a potable water source for the Site; therefore, it is not evaluated in this HHRA.

[16] Outdoor air will be considered for residential receptors only for those PARC areas in which risks associated with indoor air exceed *de minimis* levels.

[17] Dermal absorption of VOCs in soil is an insignificant soil exposure pathway (DTSC, 2014).

5.3 RISK-BASED CONCENTRATIONS

COPC-specific soil and air risk-based concentrations (RBCs), based on regulatory agency-promulgated toxicity criteria, exposure parameters, and dose equations, have been developed by CalEPA ("DTSC-SLs", CalEPA, 2018) and USEPA ("RSLs", USEPA, 2017a) for residential receptors. CalEPA has also developed COPC-specific soil risk-based concentrations for the construction worker receptor ("ESLs", RWQCB, 2016). The risk-based concentrations (**Table 5** for the residential receptor and **Table 6** for the construction worker receptor) are used along with the exposure point concentrations presented in the following the subsection to calculate the risk values presented in the Risk Characterization (**Section 6**). The derivation of the air RBCs listed in **Table 6** for the construction worker receptor is presented in **Attachment N**.

5.4 EXPOSURE POINT CONCENTRATIONS

This section presents the exposure point concentrations (EPCs) for the soil exposure pathways, indoor air (for the residential receptor only), and outdoor air (for the construction worker only).

The EPC is the COPC- and medium-specific concentration used along with the risk-based concentrations in the dose and exposure equations for each exposure pathway. The methods, rationale, and assumptions employed in deriving the EPCs are discussed further below.

5.4.1 Soil EPCs

In accordance with USEPA guidance (USEPA, 1989), soil EPCs were calculated for all direct-contact soil exposure scenarios, and particulate inhalation as the 95% upper confidence limit (UCL) on the mean concentration, using USEPA's ProUCL software (version 5.1; USEPA, 2015). The data for all soil COPC samples for depths between 0 to 10 feet bgs for the residential and construction worker receptors. The resulting EPCs are presented in the PARC Area-specific attachments as follows:

- PARC Area 1A: Attachment H, **Table H-3**;
- PARC Area 2A, 2B, and 2C: Attachment I, **Table I-4**;
- PARC Area 5: Attachment J, **Table J-3**;
- PARC Area 6: Attachment K, **Table K-4**;
- PARC Area 7: Attachment L, **Table L-4**; and
- PARC Area 8: Attachment M, **Table M-4**.

Because the RBCs are on a dry weight basis, the wet weight concentration results as reported by the laboratory were converted to dry weight concentrations as described in the footnote to the attachment tables.

The ProUCL output files are provided in **Attachment O**. For 'non-detect' ('ND') results, the concentration was conservatively assumed to the reporting limit (i.e., the italicized values in the attachment tables). Given the large number of 'ND' results, the UCLs may be strongly affected by laboratory reporting limits more so than the actual presence of some COPCs in some PARC Areas as follows:

- PARC Area 1A: mercury;
- PARC Area 2A, 2B, and 2C: mercury, TPH-GRO, TPH-DRO, and TPH-ORO;
- PARC Area 5: none;
- PARC Area 6: antimony, cadmium, selenium, and silver;
- PARC Area 7: mercury, TPH-GRO, TPH-DRO, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and alpha-BHC;
- PARC Area 8: none.

In those cases where there are an insufficient number of samples to calculate a 95% UCL, the maximum concentration is used as the EPC. Also, in some cases, an alternative UCL value was used for the soil EPC due to unstable H-statistic values as noted in the ProUCL output files.

5.4.2 Indoor and Outdoor (Construction Trench) Air Attenuation Factors and EPCs

Indoor air EPCs were calculated as the product of sample-specific soil gas concentrations and model-predicted COPC-specific soil gas-to-indoor air attenuation factors (α_{indoor} values). The sample-specific approach was taken as the comparatively small footprint of a default residential building (10 meters by 10 meters) relative to the lateral spacing of the soil gas samples precludes derivation of a 95% UCL. The COPC-specific α_{indoor} values were calculated using the USEPA implementation of the Johnson & Ettinger (J&E) model (Johnson and Ettinger, 1991 and USEPA, 2017b). The model used in this HHRA was configured consistent with that used by CalEPA (CalEPA, 2005) to derive the default α_{indoor} values listed in Table 2 of CalEPA's Final Vapor Intrusion Guidance (CalEPA, 2011). This is especially appropriate for future redevelopment as the uppermost layer consists of a comparatively dry subslab sand underlain by engineered fill typical for redevelopment as discussed in CalEPA (2005). The third and deepest layer is reserved for the site-specific soils using the soil physical properties (i.e., dry bulk density, porosity, and water-filled porosity) provided in **Table 1**. The α_{indoor} values are listed in **Table 7a**.

Similarly, the outdoor (construction trench) air EPCs were calculated as the product of sample-specific soil gas concentrations and model-predicted COPC-specific soil gas-to-construction trench air attenuation factors (α_{trench} values). The sample-specific approach was taken to be consistent with that used for indoor air. The COPC-specific α_{trench} values calculated using the Virginia Department of Environmental Quality trench attenuation factor (α_{trench}) model (VDEQ, 2018) as provided by CalEPA (CalEPA, 2017c). The trench model spreadsheet is presented in **Attachment P**. The α_{trench} values are listed in that attachment and **Table 7b**.

The indoor air and construction trench air EPCs are calculated as the product of the sample- and COPC-specific soil gas concentrations and the associated attenuation factors and are listed in PARC Area-specific attachments for those areas with soil gas COPCs[18] as follows:

- PARC Area 2A, 2B, and 2C: Attachment I, **Table I-5a,b**;
- PARC Area 7: Attachment L, **Table L-5a,b**; and
- PARC Area 8: Attachment M, **Table M-5a,b**.

[18] As discussed earlier and shown in **Table 4**, the PARC Areas with soil gas COPCs are PARC Area 2A/2B/2C, 7, and 8. That is, there are no soil gas COPCs associated with PARC Areas 1A, 5, and 6.

6.0 RISK CHARACTERIZATION

The risk characterization is the last step of the HHRA and involves estimating the potential risks to human health posed by the assumed exposure to the COPCs.

6.1 CALCULATION OF RISK VALUES

The soil, indoor air, and trench air EPCs are used in conjunction with the RBCs to calculate risk values (i.e., HI and ILCR values) consistent with the ratio approach set forth in CalEPA and USEPA guidance (CalEPA, 2011 and USEPA, 2017c).

Eqn. 1:

$$HI = RHQ \times \left(\frac{EPC_{COPC1}}{RBC_{NC,COPC1}} + \frac{EPC_{COPC2}}{RBC_{NC,COPC2}} + \cdots + \frac{EPC_{COPCn}}{RBC_{NC,COPCn}} \right)$$

Eqn. 2:

$$ILCR = RR \times \left(\frac{EPC_{COPC1}}{RBC_{C,COPC1}} + \frac{EPC_{COPC2}}{RBC_{C,COPC2}} + \cdots + \frac{EPC_{COPCn}}{RBC_{C,COPCn}} \right)$$

where:

HI	hazard index (unitless);
RHQ	reference hazard quotient (1.0; unitless)[19];
ILCR	incremental lifetime cancer risk (unitless);
RR	reference incremental lifetime cancer risk (1E-06; unitless);
EPC_{COPC1}	exposure point concentration for first of "n" COPCs (µg/kg or µg/m^3);
EPC_{COPC2}	exposure point concentration for second of "n" COPCs (µg/kg or µg/m^3);
EPC_{COPCn}	exposure point concentration for last of "n" COPCs (µg/kg or µg/m^3);
$RBC_{NC,COPC1}$	RBC for non-cancer endpoint for first of "n" COPCs (µg/kg or µg/m^3);
$RBC_{NC,COPC2}$	RBC for non-cancer endpoint for second of "n" COPCs (µg/kg or µg/m^3);

[19] The ratios in the parenthetical term of Eq. 1 are referred to as the hazard quotient.

$RBC_{NC,COPCn}$ RBC for non-cancer endpoint for last of "n" COPCs (µg/kg or µg/m^3);
$RBC_{C,COPC1}$ RBC for cancer endpoint for first of "n" COPCs (µg/kg or µg/m^3);
$RBC_{C,COPC2}$ RBC for cancer endpoint for second of "n" COPCs (µg/kg or µg/m^3); and
$RBC_{C,COPCn}$ RBC for cancer endpoint for last of "n" COPCs (µg/kg or µg/m^3).

6.2 SOIL RISK VALUES

Soil risk values are discussed for each PARC Area and summary tables listing the risk values are included in the attachments specific to the areas as discussed in the subsections below.

6.2.1 PARC Area 1A

The soil risk values are listed in **Table H-4**. The ILCR for both receptors are below the *de minimis* level of 1E-06.

The HI for the residential receptor exceeds the benchmark level of 1.0 for the residential receptor whereas the HI for the construction worker receptor is below the benchmark level.

The HI exceedance for the residential receptor is associated with TPH-DRO. The TPH-DRO exceedance is associated with the HQ value for the 2-foot bgs sample collected at L-12. It is possible that collection of additional TPH-DRO samples could decrease the EPC such that the HQ value decreases to a value below 1.0. The mercury HQ (0.8) is such that even if additional TPH-DRO samples were collected and the resulting HQ value decreased to a value below 1.0, a target organ assessment such as that presented below for PARC Area 2A, 2B, and 2C would likely be required.

Lead exceeds its screening level at several locations resulting in an EPC above the screening level for both receptors. Therefore, lead will likely warrant additional site characterization, risk characterization, and/or remediation/mitigation.

6.2.2 PARC Area 2A, 2B, and 2C

The soil risk values are listed in **Table I-6**. The ILCR for both receptors are below the *de minimis* level of 1E-06 as there are no carcinogenic soil COPCs.

The HI for the residential receptor exceeds the benchmark level of 1.0 for the residential receptor whereas the HI for the construction worker receptor is below the benchmark level.

Consistent with CalEPA guidance (CalEPA, 2015), the HI value for the residential receptor is recalculated by only summing exposure to all media for chemicals which have the same toxic manifestation or affect the same target organ. The recalculation focuses on the two risk drivers – mercury and TPH-GRO – and also the lesser risk driver TPH-DRO given its similarity to TPH-GRO.

- Mercury: According to USEPA (2018; Integrated Risk Information System [IRIS]), mercury exposure can result in hand tremor, increases in memory disturbances, slight subjective and objective evidence of autonomic dysfunction[20].
- TPH-GRO and TPH-DRO: USEPA (2018) does not contain information regarding TPH fractions. The Agency for Toxic Substances & Disease Registry (ATSDR, 2018) does not speak to specific TPH fractions but rather to 'TPH compounds' (e.g., VOCs such as benzene, toluene, ethylbenzene, xylenes, and trimethylbenzenes and SVOCs such as naphthalene) and states that "…some TPH compounds can affect the central nervous system. One compound can cause headaches and dizziness at high levels in the air. Another compound can cause a nerve disorder called peripheral neuropathy, consisting of numbness in the feet and legs. Other TPH compounds can cause effects on the blood, immune system, lungs, skin, and eyes. Animal studies have shown effects on the lungs, central nervous system, liver, and kidney from exposure to TPH compounds. Some TPH compounds have also been shown to affect reproduction and the developing fetus in animals." TPH compounds include VOCs and SVOCs - chemical classes that were tested for and not detected in soil.

It appears that the health effects associated with mercury and TPH-GRO / TPH-DRO differ such that noncancer health effects may be evaluated separately. When this approach is taken, the HQ values are less than the benchmark level 1.0 indicating that there is no significant noncancer health effect due to mercury and TPH in soil.

Lead is a COPC solely due to the detection in soil at A-13-21 at 5 ft bgs at a concentration of 170 mg/kg on a wet weight basis and 180 mg/kg on a dry weight basis. The 95% UCL (28 mg/kg on a dry weight basis) is below both the residential and construction screening levels of 80 and 160 mg/kg, respectively. However, consistent with CalEPA guidance (CalEPA, 2018), this single elevated concentration would be considered an outlier or 'hot spot' and therefore, when evaluated individually, this location exceeds the residential and construction screening levels.

6.2.3 PARC Area 5

The soil risk values are listed in **Table J-4**. The ILCR for both receptors are below the *de minimis* level of 1E-06 as there are no carcinogenic soil COPCs.

The HI for the residential receptor exceeds the benchmark level of 1.0 for the residential receptor whereas the HI for the construction worker receptor is below the benchmark level.

The HI exceedance for the residential receptor is associated with TPH-DRO. The TPH-DRO exceedance is associated with the HQ value for the two samples in which it was analyzed. Given

[20] Autonomic dysfunction is a medical condition used to describe the disabling function (or failure) of the autonomic nervous system, which uniquely controls the body's involuntary function such as blood pressure, heart rate, temperature, digestion, and perspiration.

that only two samples were tested for TPH-DRO, it is likely that additional sampling and/or remediation/mitigation will be warranted.

The lead EPC – at 81 mg/kg – slightly exceeds its residential screening level of 80 mg/kg. The EPC is below the construction screening level of 160 mg/kg.

6.2.4 PARC Area 6

The soil risk values are listed in **Table K-5**. The ILCR for the residential receptor – at 1.1E-06 – slightly exceeds the *de minimis* level of 1E-06. The ILCR for the construction worker receptor is below the *de minimis* level.

The HI for both the residential and construction worker receptors exceeds the benchmark level of 1.0.

The HI exceedance for the residential receptor is primarily associated with TPH-DRO. Antimony and mercury are secondary contributors to the HI value. The HI exceedance for the construction worker receptor is also associated with these three COPCs; however, none of the HQ values exceed 1.0 so a target organ assessment such as that presented above for PARC Area 2A, 2B, and 2C may show an acceptable HI value for this receptor.

Lead exceeds its screening level at several locations resulting in an EPC above the screening level for both receptors. Therefore, lead will likely warrant additional site characterization, risk characterization, and/or remediation/mitigation.

Arsenic is not included in the risk characterization as its EPC (6.6 mg/kg) was calculated to be below the regional background value of 12 mg/kg. Several VOCs were detected in soil at several locations, most notably TCE at 12 mg/kg in the 1-foot sample from boring 18.2-1-1, and are not included in the risk calculations as soil gas sampling and possibly additional soil sampling for VOCs will likely be required in this PARC Area.

6.2.5 PARC Area 7

The soil risk values are listed in **Table L-6**. The ILCR for both the residential and construction worker receptors are below the *de minimis* level of 1E-06.

The HI for both the residential and construction worker receptors exceeds the benchmark level of 1.0. The HI exceedance for the residential receptor is primarily associated with TPH-DRO. Mercury and copper are secondary contributors to the residential HI value. The HI exceedance for the construction worker receptor is associated with TPH-DRO.

The lead EPC – at 58 mg/kg - is below its screening level for both receptors.

6.2.6 PARC Area 8

The soil risk values are listed in **Table M-6**. The ILCR for both the residential and construction worker receptors are below the *de minimis* level of 1E-06 as there are no carcinogenic soil COPCs.

Similarly, the HI for both the residential and construction worker receptors are below the benchmark level of 1.0.

The lead EPC – at 130 mg/kg – exceeds its residential screening level but is below the construction worker screening level. The exceedance is associated primarily with the detections in the 0.5-foot and 1-foot samples from boring 8-1 and the 0.5-foot sample from boring L-1.

6.3 SOIL GAS RISK VALUES

Risk values associated vapor intrusion of soil gas into indoor air (for the residential receptor) and a construction trench (for the construction worker receptor) are discussed for each PARC Area and summary tables listing the risk values are included in the attachments specific to the areas.

6.3.1 PARC Area 1A

There are no soil gas COPCs associated with this PARC Area.

6.3.2 PARC Area 2A, 2B, and 2C

The residential indoor air risk values and construction worker trench air risk values for PARC Area 2A, 2B, and 2C are presented in the subsections below.

6.3.2.1 Residential Indoor Air

The residential indoor air ILCR values are tabulated in **Table I-7a** whereas the HQ and HI values are tabulated in **Table I-7b**.

- None of the ILCR values exceed the benchmark level of 1E-06.
- None of the HI values exceed the benchmark level of 1.0.

There are several sample-specific instances in which the ILCR value exceeds 1E-07 and the HI value exceeds 0.1. These values could result in an overall exceedance when added to the soil ILCR and HI values.

6.3.2.2 Construction Trench Air

The construction trench air ILCR values are tabulated in **Table I-7c** whereas the HQ and HI values are tabulated in **Table I-7d**.

- None of the ILCR values exceed the benchmark level of 1E-06.
- None of the HI values exceed the benchmark level of 1.0.

6.3.3 PARC Area 5

There are no soil gas COPCs associated with this PARC Area.

6.3.4 PARC Area 6

There are no soil gas COPCs associated with this PARC Area.

6.3.5 PARC Area 7

The residential indoor air risk values and construction worker trench air risk values for PARC Area 7 are presented in the subsections below.

6.3.5.1 Residential Indoor Air

The residential indoor air ILCR values are tabulated in **Table L-7a** whereas the HQ and HI values are tabulated in **Table L-7b**.

- Five samples exceed the ILCR benchmark level of 1E-06 due primarily to PCE.
- One sample exceeds the HI benchmark level of 1.0 due primarily to TPH-GRO.

There are several sample-specific instances in which the ILCR value exceeds 1E-07 (due primarily to PCE) and the HI value exceeds 0.1 (due primarily to TPH-GRO). These values could result in an overall exceedance when added to the soil ILCR and HI values.

6.3.5.2 Construction Trench Air

The construction trench air ILCR values are tabulated in **Table L-7c** whereas the HQ and HI values are tabulated in **Table L-7d**.

- None of the ILCR values exceed the benchmark level of 1E-06.
- One sample (P20-VP-1) exceeds the HI benchmark level of 1.0 due to TPH-GRO.

There are several sample-specific instances in which the HI value exceeds 0.1 (due primarily to TPH-GRO). These values could result in an overall exceedance when added to the soil HI values.

6.3.6 PARC Area 8

The residential indoor air risk values and construction worker trench air risk values for PARC Area 8 are presented in the subsections below.

6.3.6.1 Residential Indoor Air

The residential indoor air ILCR values are tabulated in **Table M-7a** whereas the HQ and HI values are tabulated in **Table M-7b**.

- The one sample for this area exceeds the ILCR benchmark level of 1E-06 due primarily to PCE.
- The one sample for this area is below the HI benchmark level of 1.0.

Given the ILCR exceedance for the one sample for this area, additional characterization may be warranted.

6.3.6.2 Construction Trench Air

The construction trench air ILCR values are tabulated in **Table M-7c** whereas the HQ and HI values are tabulated in **Table M-7d**.

- The ILCR value for the one sample for this area is below the benchmark level of 1E-06.
- The HI value for the one sample for this area is below the benchmark level of 1.0.

6.4 SUMMARY

The soil risk values (which are associated with 95% UCLs for the soil COPCs) and the maximum indoor and trench air risk values (which are associated with sample-specific concentrations for the soil gas COPCs) are summarized for each PARC Area in **Table 8**.

- The ILCR values exceed the risk benchmark level only for the residential receptor in PARC Areas 6, 7, and 8 and then only slightly so. The maximum ILCR value is 5E-06 for PARC Area 7; therefore, the exceedances are within the 1E-04 to 1E-06 risk management range. The risk-driving COPCs are Aroclor 1260 in soil (PARC Area 5) and PCE in soil gas (PARC Areas 7 and 8).
- The HI values exceed the benchmark level for the residential receptor in all PARC Areas except PARC Area 8. The HI values exceed the benchmark level for the construction worker receptor in PARC Area 6 and 7 due to TPH-DRO.
- Lead exceeds the residential screening level in all PARC Areas 1A, 5, 6, and 8; it exceeds the construction worker screening level in PARC Area 1A and 6.
- TPH-DRO and lead are the primary risk-driving COPCs.

6.5 UNCERTAINTY ANALYSIS

Uncertainty is inherent in many aspects of the risk assessment process. Uncertainty generally arises from a lack of knowledge, as well as variability of (1) site conditions and future site use, (2) toxicity and exposure parameters associated with the RBCs, and/or (3) the extent to which an individual may be exposed (if at all) to the chemicals and an individual's response to the exposure. This lack of knowledge means that assumptions must be made based on information presented in the scientific literature or on professional judgment. Although some assumptions have a significant scientific basis, many do not. The assumptions that introduce the greatest amount of uncertainty, and their effects on the findings of this HHRA, are discussed further below. This discussion is qualitative in nature, reflecting the difficulty of quantifying the uncertainty in specific assumptions. In general, assumptions were selected in a manner that purposely biases the process toward health protection.

6.5.1 Uncertainty Associated with Site Characterization Data

Samples cannot be collected from every possible location; therefore, there is always some uncertainty associated with the representativeness of site characterization data. With the exception of the absence of soil gas samples in Area 6, soil and soil gas samples provided reasonable lateral and vertical coverage of the Site, were generally targeted to known or suspected source areas, and were tested for representative analytical suites given the history of the Site. The soil physical parameter data are consistent with the generally sandy soils encountered at the Site. Accordingly, the relative uncertainty in the site characterization data in terms of sample location and density is low for all areas except for soil gas in Area 6.

6.5.2 Uncertainty Associated with Risk-Based Concentrations

As mentioned earlier, the RBCs are based on toxicity parameters and exposure parameters published by CalEPA and USEPA. A large source of uncertainty in any risk assessment is the limited understanding of toxicity to humans who are exposed to the low concentrations that are generally encountered in the environment. Most toxicity data are from animal studies; these data are extrapolated using mathematical models or multiple uncertainty factors to predict what might occur in humans. Sources of conservatism in the toxicity criteria used in this HHRA include:

- the use of conservative methods and assumptions to extrapolate from high-dose animal studies to predict the possible response in humans at exposure levels far below those administered to animals;
- the assumption that chemicals considered to be carcinogens do not have thresholds (i.e., for all doses greater than zero, some risk is assumed to be present); and
- the fact that epidemiological studies (i.e., human exposure studies) are limited and are not generally considered quantitatively in deriving toxicity values.

In aggregate, these assumptions lead to overestimates of risk, such that the actual risk is unlikely to be higher than the estimated risk, but could be considerably lower and, in fact, could be zero. In addition, there were no toxicity values available for some COPCs (2,2,4-trimethylpentane and ethanol). While the impact of the lack of toxicity values for these two COPCs serves to underestimate risk, the overall impact to the HHRA is considered low.

It is our understanding that the ESLs used for the construction worker soil RBCs will be revised in June or July. Therefore, subsequent HHRA's that may be conducted for other PARC areas and/or future reviewers may rely on a different set of soil RBCs for the constructions worker than those relied upon for this HHRA.

For TPH-GRO, the residential soil RBC is driven by the inhalation exposure pathway based on an outdoor air model. Because TPH-GRO is also assessed using soil gas data and the J&E model – an indoor air model – the cumulative (soil plus soil gas) risk values effectively 'double count' since a receptor cannot be simultaneously present indoors and outdoors. We also note that the soil RBC for TPH-GRO is based on the more conservative of the two low molecular weight fractions (i.e., aromatic is selected over aliphatic as opposed to weighting the two fractions as had previously been allowed by CalEPA).

The exposure assessment in this HHRA is based on a reasonable maximum exposure (RME) scenario, which is defined by USEPA as the highest exposure that could reasonably be expected to occur for a given exposure pathway at a site (USEPA, 1989). To achieve this goal, the RME scenario uses highly conservative exposure assumptions. For example, this HHRA assumes that a future resident receptor is present at home 24 hours per day, 350 days per year, for 26 years. These and other upper-bound, default estimates of exposure most likely overestimate the potential health risks associated with the site. In reality, the Site will not be developed for the residential use considered herein but rather, will be redeveloped as an outdoor greenbelt/park with limited commercial use. Therefore, the likelihood of underestimating potential health risks is considered low.

6.5.3 Uncertainty Associated with Exposure-Point Concentrations

The 95% UCL concentration consistent with USEPA guidance (1989) was used as the EPC for the soil COPCs. The reporting limit was used for non-detect ('ND') results thereby yielding conservative estimates of the EPCs as the actual concentration of 'ND' samples could be zero.

For the soil gas COPCs, the J&E model and VDEQ trench model are both generally considered to be conservative; therefore, the indoor and trench air EPCs are likely to be conservative overestimates leading to overestimated risk values. Perhaps most importantly, no residential dwelling will be constructed at the Site as part of the planned redevelopment; therefore, the only exposure to a residential receptor would be a greenbelt visitor. The exposure frequency, duration, and time for such a greenbelt visitor will be significantly less than that for the default residential receptor considered here. Additionally, it has been our experience that outdoor air models used to quantify EPCs for such a visitor typically yield EPCs ten to one-hundred times lower than those obtained using the J&E model.

6.5.4 Uncertainty Associated with Risk Characterization

The uncertainties associated with risk characterization are generally the result of the combined uncertainties in the site conditions, exposure assumptions, and toxicity criteria. In this HHRA, potential health risks were quantified for future residents and construction workers. Given the highly conservative nature of the exposure parameters used to characterize these scenarios, it is highly unlikely that the same receptor would be exposed at that level over the entire duration of exposure. These conservative estimates of exposure were then combined with even more conservative estimates of acceptable exposure or carcinogenic potency to estimate the magnitude (noncancer) or likelihood (cancer) of potential effects.

One source of uncertainty that is unique to risk characterization is the assumption that the total risk associated with exposure to multiple chemicals is equal to the sum of the individual risks for each chemical (i.e., the risks are additive). Other possible interactions include synergism, where the total risk is higher than the sum of the individual risks, and antagonism, where the total risk is lower than the sum of the individual risks. Relatively few data are available regarding potential chemical interactions following environmental exposure to chemical mixtures. Some studies have been carried out in rodents that were given simultaneous doses of multiple chemicals. The results of these studies indicated that no interactive effects were observed for mixtures of chemicals that affect different target organs (i.e., each chemical acted independently), whereas antagonism was observed for mixtures of chemicals that affect the same target organ, but by different mechanisms (Risk Commission, 1997).

While there are no data on chemical interactions in humans exposed to chemical mixtures at the dose levels typically observed in environmental exposures, animal studies suggest that synergistic effects will not occur at levels of exposure below their individual effect levels (Seed et al., 1995). As exposure levels approach the individual effect levels, a variety of interactions may occur, including additive, synergistic, and antagonistic interactions (Seed et al., 1995).

USEPA guidance for risk assessment of chemical mixtures (USEPA, 1986) recommends assuming an additive effect following exposure to multiple chemicals. Subsequent recommendations by

other parties, such as the National Research Council (1988) and the Presidential/Congressional Commission on Risk Assessment and Risk Management (Risk Commission, 1997) have also advocated a default assumption of additivity. As currently practiced, risk assessments of chemical mixtures generally sum cancer risks regardless of tumor type and sum non-cancer hazard indices regardless of toxic endpoint or mode of action. Given the available experimental data, this approach likely overestimates potential risks associated with simultaneous exposure to multiple chemicals.

In summary, these and other assumptions contribute to the overall uncertainty in the results of the HHRA. However, given that the largest sources of uncertainty generally result in overestimates of exposure or risk, it is believed that the noncarcinogenic and carcinogenic risks presented in this HHRA represent conservative estimates of the risks, if any, posed by residual chemicals at the site.

7.0 CONCLUSIONS

This HHRA addresses PARC Areas 1A, 2A/2B/2C, 5, 6, 7, and 8 associated with redevelopment of the Sixth Street Viaduct located in Los Angeles, California. This HHRA was conducted in accordance CalEPA and USEPA guidance. As directed by the LACFD, potential health risks associated with a residential (e.g., unrestricted land use) scenario and a construction scenario were quantified.

7.1 RESIDENTIAL SCENARIO

The incremental lifetime cancer risk (ILCR) values are below the CalEPA and USEPA *de minimis* risk target of 1E-06 or within the commonly-applied risk management range (1E-06 to 1E-04) (CalEPA 2011). Given that the actual future planned use for the Site, and assuming soil gas samples anticipated to be required in PARC Area 6 yield ILCR values below the *de minimis* risk target or within the risk management range, it is our opinion that a regulatory agency would consider carcinogenic health impacts to be insignificant such that mitigative and/or remedial actions would not be required.

The noncancer hazard index (HI) exceeds the regulatory benchmark of 1.0 in all areas except PARC Area 8 primarily due to TPH-DRO. Lead exceeds its screening level in all areas except PARC Area 2A/2B/2C and 7. The TPH-DRO and lead exceedances are commonly driven by a limited number of samples within limited areas. Absent additional site or risk characterization or – more importantly - consideration of the conservative nature of this HHRA which includes this hypothetical receptor, it has been our experience that a regulatory agency may request mitigative and/or corrective action at these locations.

7.2 CONSTRUCTION WORKER SCENARIO

The ILCR in all PARC Areas is below the CalEPA and USEPA *de minimis* risk target of 10^{-6} and below the commonly-applied risk management target ILCR of $1x10^{-5}$. It has been our experience that a regulatory agency would consider carcinogenic health impacts to be insignificant such that mitigative and/or remedial actions would not be required.

The noncancer hazard index (HI) exceeds the regulatory benchmark of 1.0 in PARC Areas 7 and 8 primarily due to TPH-DRO. Lead exceeds its screening level in PARC Areas 1A and 6. As above for the residential receptor, the TPH-DRO and lead exceedances are commonly driven by a limited number of samples within limited areas. Absent additional site or risk characterization or

consideration of the conservative nature of this HHRA, it has been our experience that a regulatory agency may request mitigative and/or corrective action at these locations.

7.3 SUMMARY

Absent additional site or risk characterization or consideration of the conservative nature of this HHRA, it has been our experience that a regulatory agency may request mitigative and/or corrective action at a limited number of locations impacted with TPH-DRO and/or lead. It is also likely that a regulatory agency would request soil gas sampling in PARC Area 6.

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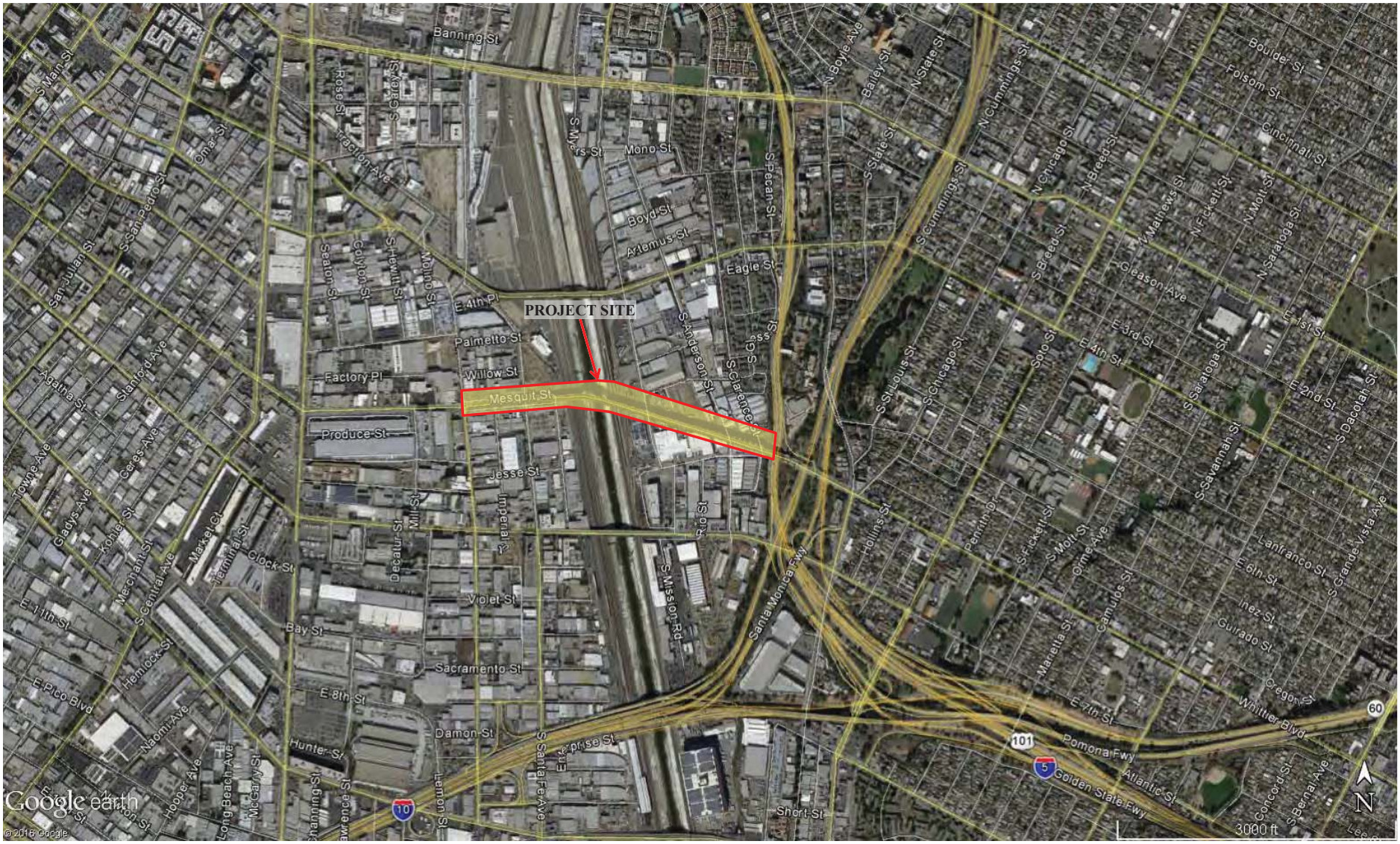
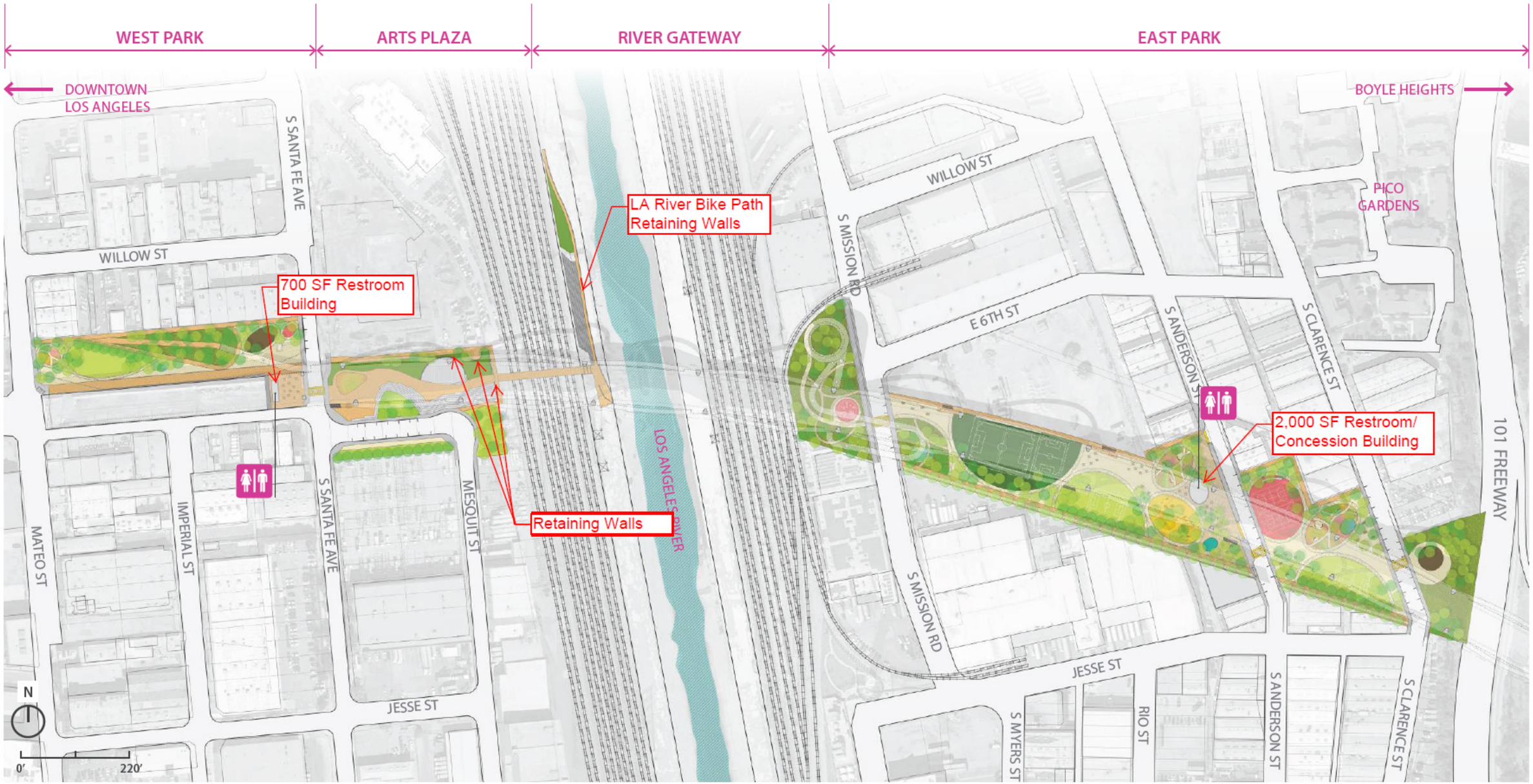
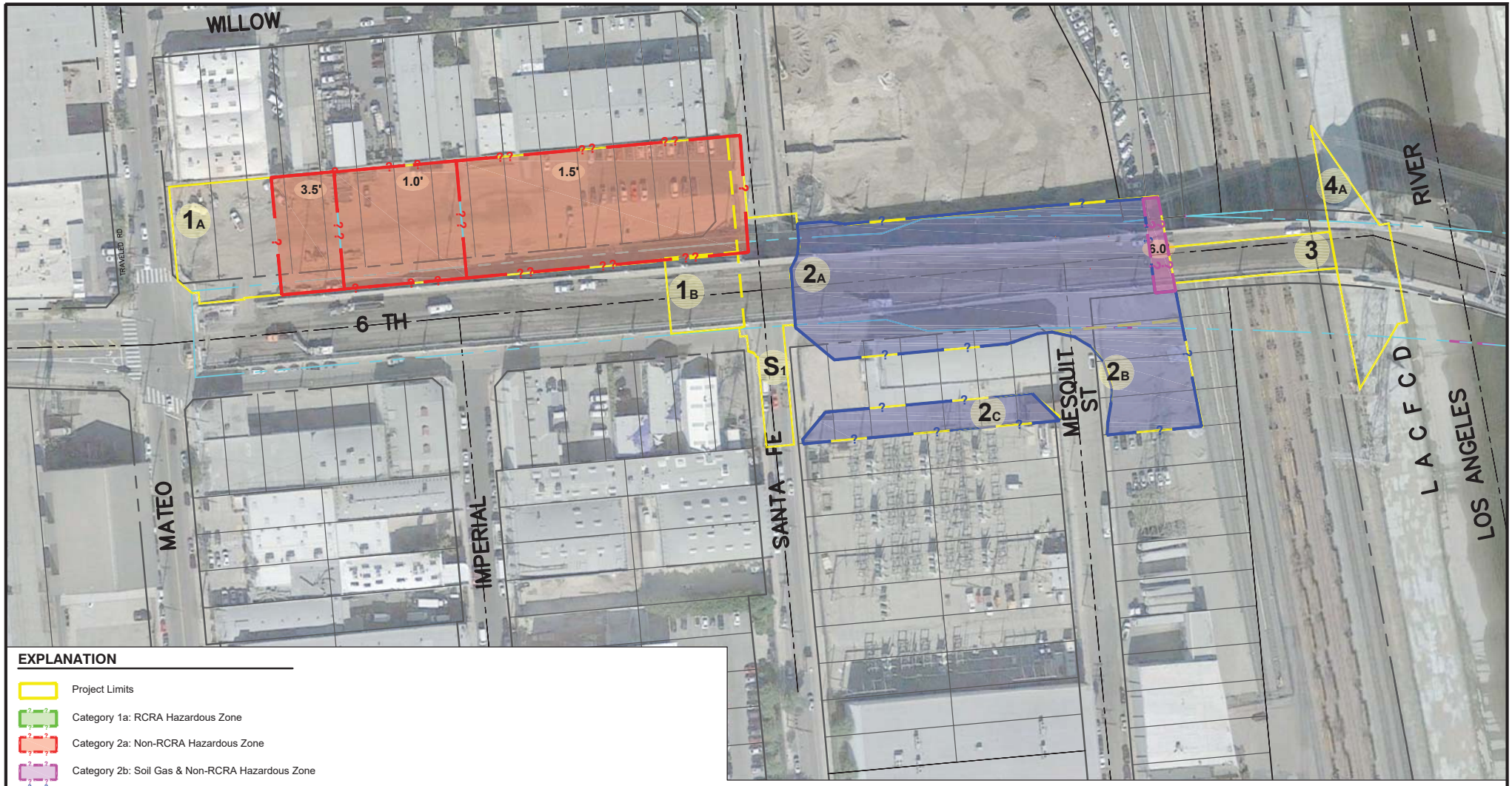
FIGURES



HUSHMAND ASSOCIATES, INC. Geotechnical and Earthquake Engineers	**SIXTH STREET VIADUCT – PARC IMPROVEMENTS** Los Angeles, California	**SITE VICINITY MAP**	Figure **1**



HUSHMAND ASSOCIATES, INC. Geotechnical and Earthquake Engineers	**SIXTH STREET VIADUCT – PARC IMPROVEMENTS** Los Angeles, California	**CONCEPTUAL DESIGN PLAN**	Figure **2**



HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

AREAS OF CONCERN WITH CONTAMINATION - WEST PARK

Figure 3

EXPLANATION

- Project Limits
- Category 1a: RCRA Hazardous Zone
- Category 2a: Non-RCRA Hazardous Zone
- Category 2b: Soil Gas & Non-RCRA Hazardous Zone
- Category 3: Soil Gas Only Zone
- Aerially Deposited Lead Zone
- 1A PARC Area Designation
- 0.75' Estimated Soil Removal Depth

0 100 200 FEET
APPROXIMATE SCALE

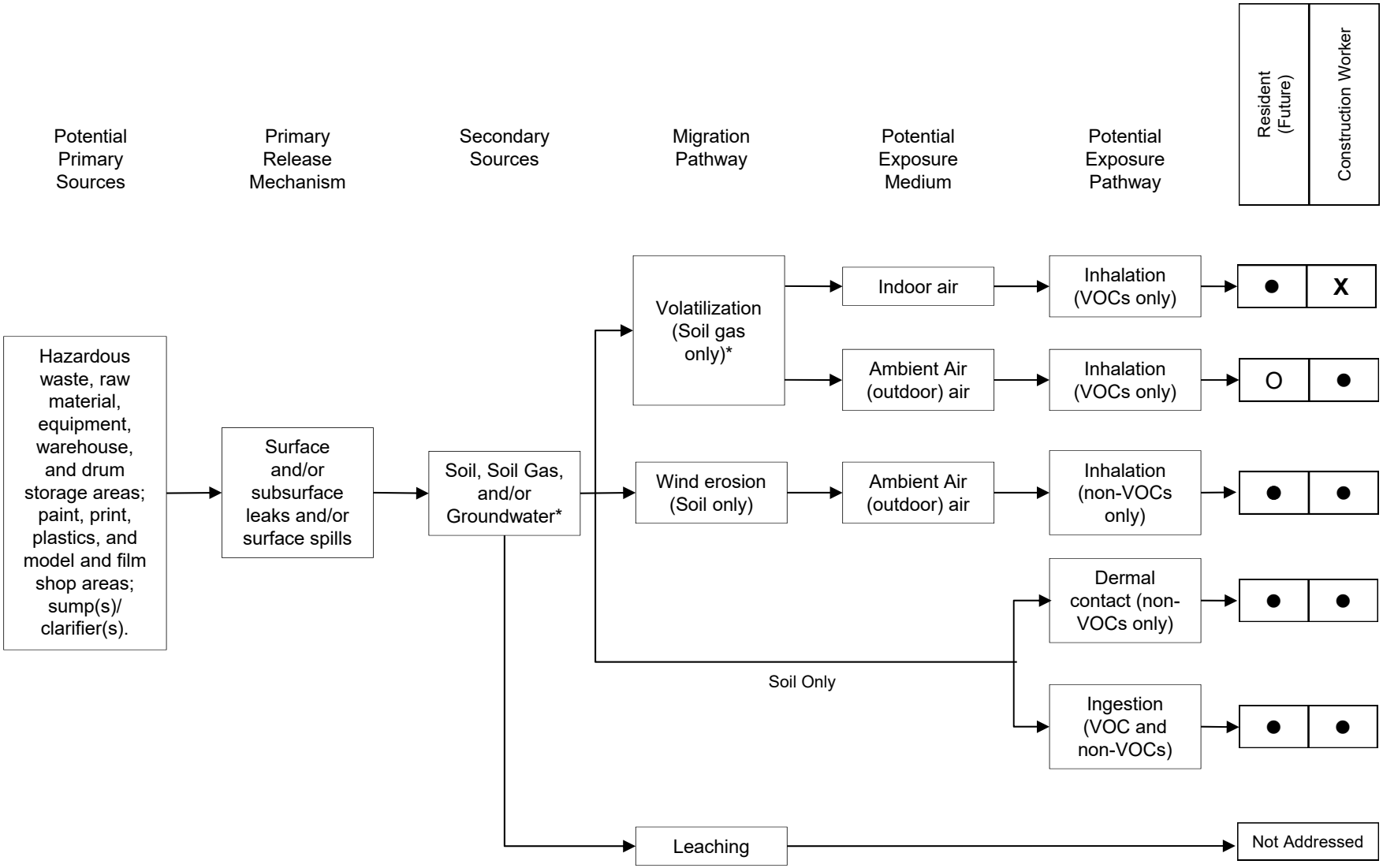
HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

AREAS OF CONCERN WITH CONTAMINATION - EAST PARK

Figure 4

Figure 5. Conceptual Site Model



● Potentially complete exposure pathway
O Potentially complete exposure pathway but will only be addressed if indoor air exceeds *de minimis* levels.
X Incomplete exposure pathway
* Volatilization off groundwater (which is at approximately 65 ft bgs) and subsequent upward migration of soil vapors will be addressed using soil gas data.

TABLES

TABLE 1

Summary of Soil Physical Parameter (SPP) Data

~ 0 to 15 ft bgs ~

SPP Boring[Note 1]	HRA AOC	Depth (ft bgs)	Logged Soil Type	Density (lbs/ft^3)	Density (g/cm^3)	Moisture (%)	Porosity (-)*	Water-filled Porosity (-)**	Air Saturation (-)***
GB-1	1A	5	Silt with Sand (ML), Silty Sand (SM), and Sand (SP)	-		-	-	-	-
GB-2	-	5	Silty Sand (SM)	-		-	-	-	-
		10	Sand with Silt and Gravel (SW-SM)	107	1.71	2	0.37	0.03	0.91
		15	Sand with Gravel (SP)	104	1.67	2	0.38	0.03	0.91
GB-3	2C	5	Silty Sand (SM)	-		-	-	-	-
GB-4	2A	5	Silty Sand (SM)	-		-	-	-	-
		10	Silty Sand (SM) and Sand (SP)	-		-	-	-	-
		15	Sand (SP)	107	1.71	9	0.37	0.15	0.58
GB-6	-	5	Silty Sand with Gravel and Sand with Silt and Gravel (SM-SP)	-		-	-	-	-
GB-7	6	5	Silt with Sand (ML) and Silty Sand (SM) and Sand (SP)	-		-	-	-	-
GB-8	6	5	Silty Sand (SM)	-		-	-	-	-
GB-9	6	5	Sand (SP)	101	1.62	3	0.40	0.05	0.88
		10	Sand with Silt and Gravel (SP) and Sand (SP)	118	1.89	3	0.30	0.06	0.81
		15	Sand (SP)	106	1.70	3	0.37	0.05	0.86
GB-10	7 Central and 7 East	5	Sand with Silt (SP-SM), Silty Sand (SM), and Sand (SP)	-		-	-	-	-
A-13-001 (D-2)	1A and 1B	10	Sand with Silt and Gravel (SP-SM)	119.7	1.92	1.7	0.29	0.03	0.89
A-13-002 (D-2)	2A	10	SM	117.9	1.89	6.7	0.30	0.13	0.58
A-13-003 (S-3)	-	15	SP-SM	-		10.3	-	-	-
A-13-008 (D-2)	6	10	SP	112.2	1.80	0.7	0.33	0.01	0.96
A-13-009 (D-2)	6	10	SP-SM	133.6	2.14	5.8	0.21	0.12	0.40

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TABLE 1
Summary of Soil Physical Parameter (SPP) Data
~ 0 to 15 ft bgs ~

SPP Boring[Note 1]	HRA AOC	Depth (ft bgs)	Logged Soil Type	Density (lbs/ft^3)	Density (g/cm^3)	Moisture (%)	Porosity (-)*	Water-filled Porosity (-)**	Air Saturation (-)***
A-13-010 (D-2)	6	10	GP-GM	128.0	2.05	6.3	0.24	0.13	0.46
A-13-014 (D-2)	7 Central and 7 East	10	SM	124.4	1.99	11.4	0.26	0.23	0.13
A-13-017 (D-2)	9	10	SM to CL	-		-	-	-	-
A-13-017 (S-3)	9	15	CL	-		-	-	-	-
A-13-018 (D-2)	-	10	SP-SM	117.3	1.88	5.5	0.30	0.10	0.66
A-13-019 (D-2)	2A	10	SP	-		3.2	-	-	-
A-13-020 (D-2)	2A	10	SM	135.4	2.17	11.9	Note 2		
A-13-021 (D-2)	3	10	SP-SM	121.7	1.95	5.0	0.28	0.10	0.65
A-13-023 (D-2)	4A	10	SM	114.1	1.83	4.4	0.32	0.08	0.75
R-13-012 (D-1)	6	5	SP-SM	119.9	1.92	8.2	0.29	0.16	0.45
R-13-012 (D-3)	6	15	SP-SM	159.8	2.56	5.2	Note 2		
R-13-015 (D-2)	7 Central and 7 East	10	SP-SM	122.9	1.97	12.7	0.27	0.25	0.08
			Minimums =>	**101.0**	**1.62**	**0.7**	**0.21**	**0.01**	**0.08**
			Averages =>	**119.5**	**1.91**	**5.8**	**0.31**	**0.10**	**0.65**
			Maximums =>	**159.8**	**2.56**	**12.7**	**0.40**	**0.25**	**0.96**
			95% UCL =>	**-**	**-**	**-**	**-**	**-**	**0.759**
			HHRA model input values =>	**-**	**1.913**	**-**	**0.311**	**0.075**	**-**

Note 1: GB boring data from HAI (January 2018 - draft); A-13 and R-13 boring data from Earth Metrics (June 19, 2015).

Note 2: Values not calculated for these high density samples.

* Porosity = 1 - Density / Grain Density, where Grain Density is assumed to be 2.7 g/cm^3 based on professional judgment.

** Water-filled Porosity = Density x Moisture / Water Density, where Water Density is assumed to be 1.0 g/cm^3.

*** Air Saturation = (1 - Saturation) / Porosity where Saturation = Water-filled Porosity / Porosity.

TABLE 2

Summary of Metals COPCs in Soil

	PARC Area					
Metal	**1A**	**2A, 2B, and 2C**	**5**	**6**	**7**	**8**
Antimony	-	-	-	❍	-	-
Arsenic	-	-	-	❍	-	-
Barium	❍	❍	-	❍	❍	❍
Beryllium	-	-	-	-	-	-
Cadmium	-	-	-	❍	-	-
Chromium	-	-	-	-	-	-
Hexavalent Chromium	-	-	-	-	-	-
Cobalt	-	-	-	-	-	-
Copper	❍	❍	-	❍	❍	❍
Lead	❍	❍	❍	❍	❍	❍
Mercury	❍	❍	-	❍	❍	-
Molybdenum	-	-	-	-	-	-
Nickel	-	-	-	❍	-	-
Selenium	-	-	-	❍	-	-
Silver	-	-	-	❍	-	-
Thallium	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-
Zinc	❍	❍	❍	❍	❍	❍

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TABLE 3

Summary of Non-Metals COPCs in Soil

	PARC Area					
Non-Metal	**1A**	**2A, 2B, and 2C**	**5**	**6**	**7**	**8**
TPH-GRO	-	❍	-	❍	❍	❍
TPH-DRO	❍	❍	❍	❍	❍	-
TPH-ORO	-	❍	-	❍	❍	-
VOCs	-	-	-	❍	❍	-
SVOCs	-	-	-	❍	-	-
PCBs	❍	-	-	❍	-	-
OCPs	❍	-	-	-	❍	-
OPPs	-	-	-	-	-	-
Chlorinated Herbicides	-	-	-	-	-	-

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TABLE 4

Summary of Soil Gas COPCs

	PARC Area					
Soil Gas Analyte	**1A**	**2A, 2B, and 2C**	**5**	**6***	**7**	**8**
1,1,1-Trichloroethane	-	❍	-	-	❍	❍
1,1-Dichloroethane	-	❍	-	-	-	-
1,2,4-Trichlorobenzene	-	❍	-	-	-	-
1,2,4-Trimethylbenzene	-	❍	-	-	-	-
1,3,5-Trimethylbenzene	-	❍	-	-	-	-
1,3-Dichlorobenzene	-	❍	-	-	-	-
2,2,4-Trimethylpentane	-	❍	-	-	-	-
2-Butanone	-	❍	-	❍	❍	❍
2-Hexanone	-	❍	-	-	-	-
4-Ethyl Toluene	-	❍	-	-	-	-
4-Methyl-2-pentanone	-	❍	-	-	-	-
Acetone	-	❍	-	❍	❍	❍
Acetonitrile	-	❍	-	-	-	-
Benzene	-	❍	-	-	❍	❍
Carbon disulfide	-	❍	-	❍	❍	❍
Chlorobenzene	-	❍	-	-	-	-
Chloroethane	-	❍	-	-	-	-
Chloroform	-	❍	-	-	❍	-
Chloromethane	-	❍	-	-	-	-
Cyclohexane	-	❍	-	-	-	-
Dichlorodifluoromethane	-	❍	-	-	-	-
Ethanol	-	❍	-	-	-	-
Ethylbenzene	-	❍	-	-	❍	-
m,p-Xylene	-	❍	-	-	❍	-
Methylene chloride	-	❍	-	-	-	-
Naphthalene	-	❍	-	-	❍	-
n-Propylbenzene	-	❍	-	-	-	-
o-Xylene	-	❍	-	-	❍	-
p-Isopropyltoluene	-	❍	-	-	-	-
Tetrachloroethene	-	❍	-	-	❍	-
Toluene	-	❍	-	-	❍	-
Trichloroethene	-	❍	-	-	❍	-
Trichlorofluoromethane	-	❍	-	-	❍	-
Vinyl acetate	-	❍	-	-	-	-
Vinyl chloride	-	❍	-	-	-	-
2-Propanol	-	❍	-	-	-	-
Gasoline Range Organics	-	❍	-	-	❍	-
1,1,2-Trichloroethane	-	-	-	-	❍	-
1,1-Dichloroethene	-	-	-	-	❍	❍

* Soil gas samples were not collected in PARC Area 6. The three detected compounds shown were detected in the single ambient air sample collected in this area.

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TABLE 5
Risk-Based Concentrations
~ Residential Receptor ~

COPC	Media		CANCER ENDPOINT					NONCANCER ENDPOINT				
			SOIL (mg/kg, dry weight basis)					SOIL (mg/kg, dry weight basis)				
	Soil	Soil Gas	Ingestion	Dermal Contact	Particulate Inhalation	Combined	Air (µg/m^3)	Ingestion	Dermal Contact	Particulate Inhalation	Combined	Air (µg/m^3)
Antimony	❍	-	--	--	--	--		3.10E+01	--	--	3.10E+01	
Arsenic	❍	-	1.22E-01	7.59E-01	1.16E+03	1.05E-01		4.56E-01	3.15E+00	2.13E+04	3.98E-01	
Barium	❍	-	--	--	--	--		1.60E+04	--	7.10E+05	1.50E+04	
Cadmium	❍	-	--	--	9.09E+02	9.09E+02		5.26E+00	1.24E+03	1.42E+04	5.23E+00	
Copper	❍	-	--	--	--	--		3.10E+03	--	--	3.10E+03	
Mercury	❍	-	--	--	--	--	Note 1	1.25E+01	4.32E+02	1.10E+00	1.01E+00	Note 1
Nickel	❍	-	--	--	1.47E+04	1.47E+04		8.60E+02	1.19E+03	1.99E+04	4.87E+02	
Selenium	❍	-	--	--	--	--		3.90E+02	--	2.80E+07	3.90E+02	
Silver	❍	-	--	--	--	--		3.91E+02	5.39E+02	--	2.27E+02	
Zinc	❍	-	--	--	--	--		2.30E+04	--	--	2.30E+04	
TPH-GRO	❍	❍	--	--	--	--	--	3.10E+02	--	1.10E+02	8.20E+01	3.10E+01
TPH-DRO	❍	-	--	--	--	--		7.80E+02	--	1.10E+02	9.60E+01	
TPH-ORO	❍	-	--	--	--	--		3.10E+03	1.30E+04	--	2.50E+03	
PCBs (Arochlor 1260)	❍	-	3.50E-01	8.80E-01	6.50E+00	2.40E-01		--	--	--	--	
alpha-BHC	❍	-	1.10E-01	3.90E-01	2.10E+03	8.60E-02	Note 1	6.30E+02	2.60E+03	--	5.10E+02	Note 1
4,4'-DDD	❍	-	2.90E+00	1.00E+01	5.50E+04	2.30E+00		2.30E+00	9.90E+00	--	1.90E+00	
4,4'-DDE	❍	-	2.00E+00	--	6.10E+01	2.00E+00		2.30E+01	--	--	2.30E+01	
4,4'-DDT	❍	-	2.00E+00	2.40E+01	3.90E+04	1.90E+00		3.90E+01	5.50E+02	--	3.70E+01	
Phenol	❍	-	--	--	--	--		2.30E+04	9.90E+04	2.80E+08	1.90E+04	
1,1,1-Trichloroethane	-	❍					--					1.04E+03
1,1-Dichloroethane	-	❍					1.75E+00					8.34E+02
1,2,4-Trichlorobenzene	-	❍					3.87E-01					2.09E+00
1,2,4-Trimethylbenzene	-	❍					--					6.30E+01
1,3,5-Trimethylbenzene	-	❍					--					6.30E+01
1,3-Dichlorobenzene	-	❍					--					2.10E+02
2,2,4-Trimethylpentane	-	❍					--					--
2-Butanone	-	❍					--					5.20E+03
2-Hexanone	-	❍					--					3.10E+01
4-Ethyl Toluene	-	❍					--					1.00E+02
4-Methyl-2-pentanone	-	❍					--					3.10E+03
Acetone	-	❍					--					3.20E+04
Acetonitrile	-	❍					--					6.30E+01
Benzene	-	❍					9.68E-02					3.13E+00
Carbon disulfide	-	❍					--					7.30E+02
Chlorobenzene	-	❍					--					5.20E+01
Chloroethane	-	❍					--					1.00E+04
Chloroform	-	❍					1.20E-01					1.00E+02
Chloromethane	-	❍					--					9.40E+01
Cyclohexane	-	❍		Note 2			--		Note 2			6.30E+03
Dichlorodifluoromethane	-	❍					--					1.00E+02
Ethanol	-	❍					--					--
Ethylbenzene	-	❍					1.10E+00					1.00E+03
m,p-Xylene	-	❍					--					1.00E+02
Methylene chloride	-	❍					1.01E+00					4.17E+02
Naphthalene	-	❍					8.30E-02					3.10E+00
n-Propylbenzene	-	❍					--					1.00E+03
o-Xylene	-	❍					--					1.00E+02
p-Isopropyltoluene	-	❍					--					1.00E+03
Tetrachloroethene	-	❍					4.60E-01					4.17E+01
Toluene	-	❍					--					3.13E+02
Trichloroethene	-	❍					4.80E-01					2.10E+00
Trichlorofluoromethane	-	❍					--					1.25E+03
Vinyl acetate	-	❍					--					2.10E+02
Vinyl chloride	-	❍					9.45E-03					1.04E+02
2-Propanol	-	❍					--					2.10E+02
1,1,2-Trichloroethane	-	❍					1.80E-01					2.10E-01
1,1-Dichloroethene	-	❍					--					7.30E+01

Note 1: Risk-based concentrations (RBCs) for air exposures via inhalation of vapor phase COPCs are not applicable to those COPCs associated solely with soil for this HHRA. Particulate inhalation is accounted for via the soil RBCs.

Note 2: RBCs for soil exposures (i.e., via ingestion, dermal contact, and particulate inhalation) are not applicable to those COPCs associated solely with soil gas for this HHRA. Various VOCs were detected in soil in PARC Areas 6 and 7. Given the elevated concentrations of non-volatile COPCs in these two areas, the risks associated with VOCs detected in soil are not quantified.

Comments:

Soil RBCs for TPH fractions based on the lower (more stringent) values USEPA RSLs published for aliphatic and aromatic fractions, Soil RBCs for TPH fractions based on low molecular weight values for TPH-GRO, medium molecular weight values for TPH-DRO, and high molecular weight values for TPH-ORO.

Green-shaded RBCs are DTSC-SLs.
Gray-shaded RBCs are USEPA RSLs.

Surrogates:

1,2-Dichlorobenzene for 1,3-Dichlorobenzene
Xylenes for 4-Ethyl Toluene
n-Propylbenzene for p-Isopropyltoluene

The Fehling Group, LLC

TABLE 6
Risk-Based Concentrations
~ Construction Worker Receptor ~

	Media		CANCER ENDPOINT					NONCANCER ENDPOINT				
			SOIL (mg/kg, dry weight basis)					SOIL (mg/kg, dry weight basis)				
COPC	Soil	Soil Gas	Ingestion	Dermal Contact	Particulate Inhalation	Combined	Air (µg/m^3)	Ingestion	Dermal Contact	Particulate Inhalation	Combined	Air (µg/m^3)
Antimony	❍	-	--	--	--	--		1.42E+02	--	--	1.42E+02	
Arsenic	❍	-	2.61E+00	1.02E+01	1.03E+02	2.03E+00		1.24E+00	4.83E+00	9.46E+01	9.76E-01	
Barium	❍	-	--	--	--	--		7.08E+04	--	3.15E+03	3.02E+03	
Cadmium	❍	-	--	--	1.05E+02	1.05E+02		1.77E+02	5.17E+02	6.31E+01	4.27E+01	
Copper	❍	-	--	--	--	--		1.42E+04	--	--	1.42E+04	
Mercury	❍	-	--	--	--	--	Note 1	5.66E+01	--	1.89E+02	4.36E+01	Note 1
Nickel	❍	-	--	--	1.70E+03	1.70E+03		3.89E+03	--	8.83E+01	8.63E+01	
Selenium	❍	-	--	--	--	--		1.77E+03	--	1.26E+05	1.75E+03	
Silver	❍	-	--	--	--	--		1.77E+03	--	--	1.77E+03	
Zinc	❍	-	--	--	--	--		1.06E+05	--	--	1.06E+05	
TPH-GRO	❍	❍	--	--	--	--	--	1.38E+04	1.61E+04	4.40E+03	2.77E+03	1.26E+02
TPH-DRO	❍	-	--	--	--	--		7.08E+03	8.28E+03	1.15E+03	8.85E+02	
TPH-ORO	❍	-	--	--	--	--		6.02E+04	7.04E+04	--	3.24E+04	
PCBs (Arochlor 1260)	❍	-	1.24E+01	1.03E+01	7.75E+02	5.60E+00		--	--	--	--	
alpha-BHC	❍	-	--	--	--	--		--	--	--	--	
4,4'-DDD	❍	-	1.03E+02	4.02E+02	6.40E+03	8.11E+01	Note 1	--	--	--	--	Note 1
4,4'-DDE	❍	-	7.29E+01	2.84E+02	4.55E+03	5.73E+01		--	--	--	--	
4,4'-DDT	❍	-	7.29E+01	2.84E+02	4.55E+03	5.73E+01		1.77E+02	6.90E+02	--	1.41E+02	
Phenol	❍	-	--	--	--	--		1.06E+05	--	1.26E+06	9.79E+04	
1,1,1-Trichloroethane	-	❍					--					4.20E+03
1,1-Dichloroethane	-	❍					1.92E+02					3.36E+03
1,2,4-Trichlorobenzene	-	❍					4.23E+01					8.40E+00
1,2,4-Trimethylbenzene	-	❍					--					2.52E+02
1,3,5-Trimethylbenzene	-	❍					--					2.52E+02
1,3-Dichlorobenzene	-	❍					--					8.40E+02
2,2,4-Trimethylpentane	-	❍					--					--
2-Butanone	-	❍					--					2.10E+04
2-Hexanone	-	❍					--					1.26E+02
4-Ethyl Toluene	-	❍					--					4.20E+02
4-Methyl-2-pentanone	-	❍					--					1.26E+04
Acetone	-	❍					--					1.30E+05
Acetonitrile	-	❍					--					2.52E+02
Benzene	-	❍					1.06E+01					1.26E+01
Carbon disulfide	-	❍					--					2.94E+03
Chlorobenzene	-	❍					--					2.10E+02
Chloroethane	-	❍					--					4.20E+04
Chloroform	-	❍					1.33E+01					4.12E+02
Chloromethane	-	❍					--					3.78E+02
Cyclohexane	-	❍	Note 2				--	Note 2				2.52E+04
Dichlorodifluoromethane	-	❍					--					4.20E+02
Ethanol	-	❍					--					--
Ethylbenzene	-	❍					1.23E+02					4.20E+03
m,p-Xylene	-	❍					--					4.20E+02
Methylene chloride	-	❍					3.07E+02					1.68E+03
Naphthalene	-	❍					9.02E+00					1.26E+01
n-Propylbenzene	-	❍					--					4.20E+03
o-Xylene	-	❍					--					4.20E+02
p-Isopropyltoluene	-	❍					--					4.20E+03
Tetrachloroethene	-	❍					5.03E+01					1.68E+02
Toluene	-	❍					--					1.26E+03
Trichloroethene	-	❍					7.48E+01					8.40E+00
Trichlorofluoromethane	-	❍					--					5.04E+03
Vinyl acetate	-	❍					--					8.40E+02
Vinyl chloride	-	❍					3.93E+00					4.20E+02
2-Propanol	-	❍					--					8.40E+02
1,1,2-Trichloroethane	-	❍					1.92E+01					8.40E-01
1,1-Dichloroethene	-	❍					--					2.94E+02

Note 1: Risk-based concentrations (RBCs) for air exposures via inhalation of vapor phase COPCs are not applicable to those COPCs associated solely with soil for this HHRA. Particulate inhalation is accounted for via the soil RBCs.

Note 2: RBCs for soil exposures (i.e., via ingestion, dermal contact, and particulate inhalation) are not applicable to those COPCs associated solely with soil gas for this HHRA. Various VOCs were detected in soil in PARC Areas 6 and 7. Given the elevated concentrations of non-volatile COPCs in these two areas, the risks associated with VOCs detected in soil are not quantified.

Comments:

Soil RBCs for TPH fractions based on the lower (more stringent) values USEPA RSLs published for aliphatic and aromatic fractions, Soil RBCs for TPH fractions based on low molecular weight values for TPH-GRO, medium molecular weight values for TPH-DRO, and high molecular weight values for TPH-ORO.

Blue-shaded RBCs are RWQCB ESLs.
Green-shaded RBCs are based on IUR and RfC values from DTSC-SL tables (see Attachment N).
Gray-shaded RBCs are based on IUR and RfC values from USEPA RSL tables (see Attachment N).

Surrogates:

1,2-Dichlorobenzene for 1,3-Dichlorobenzene
Xylenes for 4-Ethyl Toluene
n-Propylbenzene for p-Isopropyltoluene

The Fehling Group, LLC

TABLE 7a

Indoor Air Attenuation Factors (α_{indoor} values)

~ Residential Receptor ~

	Residential Indoor Air α_{indoor} Values (unitless)		
Soil Gas COPC	**5 ft bgs**	**10 ft bgs**	**15 ft bgs**
Acetone	8.11E-04	5.59E-04	4.26E-04
Acetonitrile	9.44E-04	6.67E-04	5.15E-04
Benzene	7.03E-04	4.80E-04	3.65E-04
Carbon Disulfide	7.92E-04	5.50E-04	4.22E-04
Chlorobenzene	5.99E-04	4.02E-04	3.02E-04
Chloroform	6.29E-04	4.24E-04	3.20E-04
Chloromethane	8.77E-04	6.18E-04	4.78E-04
Cyclohexane	6.47E-04	4.38E-04	3.31E-04
Dichlorobenzene, 1,2-	4.94E-04	3.25E-04	2.42E-04
Dichlorodifluoromethane	6.23E-04	4.20E-04	3.17E-04
Dichloroethane, 1,1-	6.69E-04	4.54E-04	3.44E-04
Ethyl Chloride (Chloroethane)	7.79E-04	5.40E-04	4.13E-04
Ethylbenzene	5.76E-04	3.85E-04	2.89E-04
Hexanone, 2-	5.96E-04	3.97E-04	2.98E-04
Isopropanol	8.56E-04	5.76E-04	4.34E-04
Methanol	1.15E-03	8.10E-04	6.24E-04
2-Butanone	7.26E-04	4.94E-04	3.75E-04
4-Methyl-2-Pentanone	5.89E-04	3.93E-04	2.95E-04
Methylene Chloride	7.59E-04	5.24E-04	4.00E-04
Naphthalene	5.25E-04	3.47E-04	2.59E-04
Propyl benzene	5.21E-04	3.45E-04	2.57E-04
Tetrachloroethylene	4.52E-04	2.96E-04	2.20E-04
Toluene	6.34E-04	4.28E-04	3.23E-04
Trichlorobenzene, 1,2,4-	3.70E-04	2.38E-04	1.76E-04
Trichloroethane, 1,1,1-	5.52E-04	3.67E-04	2.75E-04
Trichloroethylene	5.77E-04	3.86E-04	2.90E-04
Trichlorofluoromethane	5.56E-04	3.70E-04	2.77E-04
Trimethylbenzene, 1,2,4-	5.24E-04	3.47E-04	2.59E-04
Trimethylbenzene, 1,3,5-	5.21E-04	3.45E-04	2.58E-04
Vinyl Acetate	6.78E-04	4.61E-04	3.49E-04
Vinyl Chloride	7.96E-04	5.53E-04	4.24E-04
Xylene, m-	5.75E-04	3.84E-04	2.88E-04
Xylene, o-	5.79E-04	3.87E-04	2.91E-04
Xylene, p-	5.75E-04	3.84E-04	2.88E-04
Xylenes	5.76E-04	3.85E-04	2.89E-04
TPH-GRO	7.03E-04	4.80E-04	3.65E-04
Trichloroethane, 1,1,2-	5.67E-04	3.78E-04	2.83E-04
Dichloroethene, 1,1-	6.84E-04	4.66E-04	3.53E-04

Surrogates: Benzene = TPH-GRO, Methanol = Ethanol, 1,2-Dichlorobenzene = 1,3-Dichlorobenzene

TABLE 7b

Trench Air Attenuation Factors (α_{trench} values)

~ Construction Worker Receptor ~

	Construction Trench Air α_{trench} Values (unitless)		
Soil Gas COPC	**5 ft bgs**	**10 ft bgs**	**15 ft bgs**
Acetone	2.85E-03	2.72E-05	1.11E-05
Acetonitrile	3.60E-03	3.44E-05	1.40E-05
Benzene	2.41E-03	2.30E-05	9.36E-06
Carbon Disulfide	2.86E-03	2.73E-05	1.11E-05
Chlorobenzene	1.94E-03	1.85E-05	7.54E-06
Chloroform	2.07E-03	1.97E-05	8.04E-06
Chloromethane	3.33E-03	3.18E-05	1.30E-05
Cyclohexane	2.15E-03	2.05E-05	8.36E-06
Dichlorobenzene, 1,2-	1.51E-03	1.44E-05	5.87E-06
Dichlorodifluoromethane	2.04E-03	1.95E-05	7.95E-06
Dichloroethane, 1,1-	2.25E-03	2.15E-05	8.74E-06
Ethyl Chloride (Chloroethane)	2.79E-03	2.66E-05	1.08E-05
Ethylbenzene	1.84E-03	1.76E-05	7.16E-06
Hexanone, 2-	1.89E-03	1.81E-05	7.35E-06
Isopropanol	2.78E-03	2.65E-05	1.08E-05
Methanol	4.26E-03	4.06E-05	1.65E-05
2-Butanone	2.46E-03	2.35E-05	9.56E-06
4-Methyl-2-Pentanone	1.88E-03	1.79E-05	7.29E-06
Methylene Chloride	2.69E-03	2.56E-05	1.04E-05
Naphthalene	1.63E-03	1.55E-05	6.32E-06
Propyl benzene	1.62E-03	1.54E-05	6.29E-06
Tetrachloroethylene	1.36E-03	1.29E-05	5.28E-06
Toluene	2.09E-03	2.00E-05	8.13E-06
Trichlorobenzene, 1,2,4-	1.06E-03	1.02E-05	4.14E-06
Trichloroethane, 1,1,1-	1.74E-03	1.66E-05	6.78E-06
Trichloroethylene	1.85E-03	1.76E-05	7.18E-06
Trichlorofluoromethane	1.76E-03	1.68E-05	6.83E-06
Trimethylbenzene, 1,2,4-	1.63E-03	1.56E-05	6.34E-06
Trimethylbenzene, 1,3,5-	1.62E-03	1.55E-05	6.30E-06
Vinyl Acetate	2.28E-03	2.18E-05	8.88E-06
Vinyl Chloride	2.88E-03	2.75E-05	1.12E-05
Xylene, m-	1.84E-03	1.75E-05	7.15E-06
Xylene, o-	1.85E-03	1.77E-05	7.20E-06
Xylene, p-	1.84E-03	1.75E-05	7.13E-06
Xylenes	1.84E-03	1.76E-05	7.16E-06
TPH-GRO	2.41E-03	2.30E-05	9.36E-06
Trichloroethane, 1,1,2-	1.80E-03	1.72E-05	6.99E-06
Dichloroethene, 1,1-	2.32E-03	2.21E-05	9.02E-06

Surrogates: Benzene = TPH-GRO, Methanol = Ethanol, 1,2-Dichlorobenzene = 1,3-Dichlorobenzene

TABLE 8
Risk Characterization Summary

RESIDENTIAL RECEPTOR

PARC Area	ILCR (unitless)		TOTAL ILCR (unitless)	HI (unitless)		TOTAL HI (unitless)	Lead Soil EPC (mg/kg)	Comment
	Soil	Soil Gas (Indoor Air)		Soil	Soil Gas (Indoor Air)			
1A	8E-08	-	8E-08	2E+00	-	2E+00	389	Soil HI driven by TPH-DRO; lead exceeds screening level
2A, 2B, and 2C	0E+00	9E-07	9E-07	1E+00	3E-01	2E+00	28	Soil HI driven by TPH-DRO and mercury; target organ assessment indicates no adverse noncancer health effect
5	0E+00	-	0E+00	3E+00	-	3E+00	81	Soil HI driven by TPH-DRO; lead slightly exceeds screening level
6	1E-06	-	1E-06	1E+01	-	1E+01	1839	Soil ILCR driven by Arochlor 1260; soil HI driven by TPH-DRO; lead exceeds screening level
7	2E-08	5E-06	5E-06	2E+01	3E+00	2E+01	58	Soil gas indoor air ILCR driven by PCE; soil HI driven by TPH-DRO; soil gas indoor air HI driven by TPH-DRO
8	0E+00	2E-06	2E-06	9E-02	4E-02	1E-01	130	Soil gas indoor air driven by PCE; lead exceeds screening level

CONSTRUCTION WORKER RECEPTOR

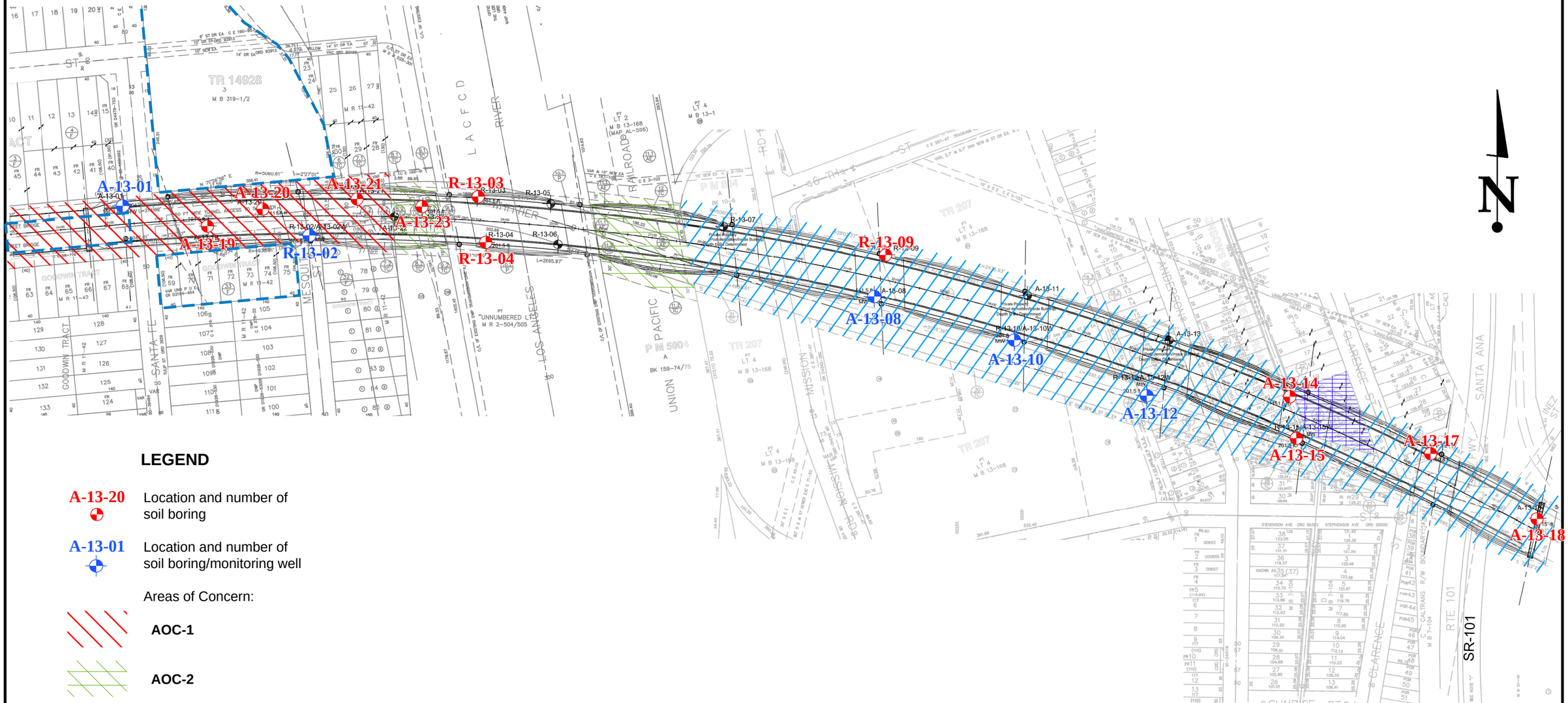
PARC Area	ILCR (unitless)		TOTAL ILCR (unitless)	HI (unitless)		TOTAL HI (unitless)	Lead Soil EPC (mg/kg)	Comment
	Soil	Soil Gas (Trench Air)		Soil	Soil Gas (Trench Air)			
1A	3E-09	-	3E-09	3E-01	-	3E-01	389	Lead exceeds screening level
2A, 2B, and 2C	0E+00	2E-08	2E-08	7E-02	2E-01	3E-01	28	-
5	0E+00	-	0E+00	3E-01	-	3E-01	81	-
6	8E-08	-	8E-08	1E+00	-	1E+00	1839	Soil HI driven by TPH-DRO; lead exceeds screening level
7	2E-10	1E-07	1E-07	2E+00	2E+00	4E+00	58	Soil HI driven by TPH-DRO; soil gas trench air HI driven by TPH-DRO
8	0E+00	2E-08	2E-08	1E-01	1E-02	2E-01	130	-

Notes
Soil risk values based on 95% UCL.
Indoor air and trench air risk values based on maximum sample-specific value.

The Fehling Group, LLC

ATTACHMENT A

Figures from EMI (2014) and HAI (2017)



LEGEND

A-13-20	Location and number of soil boring
A-13-01	Location and number of soil boring/monitoring well

Areas of Concern:

- **AOC-1**
- **AOC-2**
- **AOC-3**
- **AOC-4**

Leaking Underground Tank Site

Scale

100 0 100 200 300 400 feet

1 inch = 200 feet

Earth Mechanics, Inc.
Geotechnical & Earthquake Engineering

SIXTH STREET VIADUCT REPLACEMENT PROJECT

EMI Project No. 13-102 | Date: March 2014

FIGURE 1

Boring & Well Location Map

WILLOW

6 TH

IMPERIAL

SANTA FE

MESQUIT

RIVER

L A C F C D

LOS ANGELES

TRAVELED RD

1A

1B

2A

2B

2C

3

4A

S1

1A-1 1A-2 1A-3 1A-4 1B-1

L-7 L-8 L-11 L-12

A-13-01 A-13-19 A-13-20 A-13-21 A-13-23

2A-1 2A-2

R-13-02 R-13-03 R-13-04

RR-B1 RR-B2 RR-B3

P32-VP10 P32-VMW3

P33-VP7 P33-VP9 P33-VP12 P33-VP10 P33-VP11

P33-B1 P33-B2 P33-B3 P33-B4 P33-VP4

P33-VP8 P33-VP6 P33-VP5 P33-VP2 P33-VP3 P33-VP1

P32-VP8 P32-VP4 P32-VP3 P32-VP7 P32-B2 P32-VP9 P32-VMW2 P32-VP2 P32-VP6 P32-B1 P32-VP5 P32-VMW1 P32-VP1

EXPLANATION

- L-1 — Previ□□□S□i□B□ring □□HAI (2015 □ 2016)
- A13-17 — Previ□□□S□i□B□ring □□EMI (2013)
- 18.1-1 — Previ□□□S□i□B□ring □□Rin□□n (2015 □ 2016)
- P22-VP12 — Previ□□□V□□□r Pr□□e □□HAI (2015 □ 2016)
- P23-SV13 — Previ□□□V□□□r Pr□□e □□EMI (2014)
- P32-VMW1 — Previ□□□S□i□B□ring □ V□□□r Pr□□e □□HAI (2016)
- 1A-1 — S□i□B□ring □□HAI (2017)
- 2A-1 — S□i□B□ring □ V□□□r Pr□□e □□HAI (2017)
- Pr□e□t Li□it□
- C□teg□r□1□: RCRA H□□□rd□□□Z□ne
- C□teg□r□2□: N□n-RCRA H□□□rd□□□Z□ne
- C□teg□r□2□: S□i□G□□ □ N□n-RCRA H□□□rd□□□Z□ne
- C□teg□r□3: S□i□G□□ On□□Z□ne
- Aeri□□□De□□□ited Le□d Z□ne
- 1A — PARC Are□ De□ign□ti□n

0 100 200 FEET

APPROXIMATE SCALE

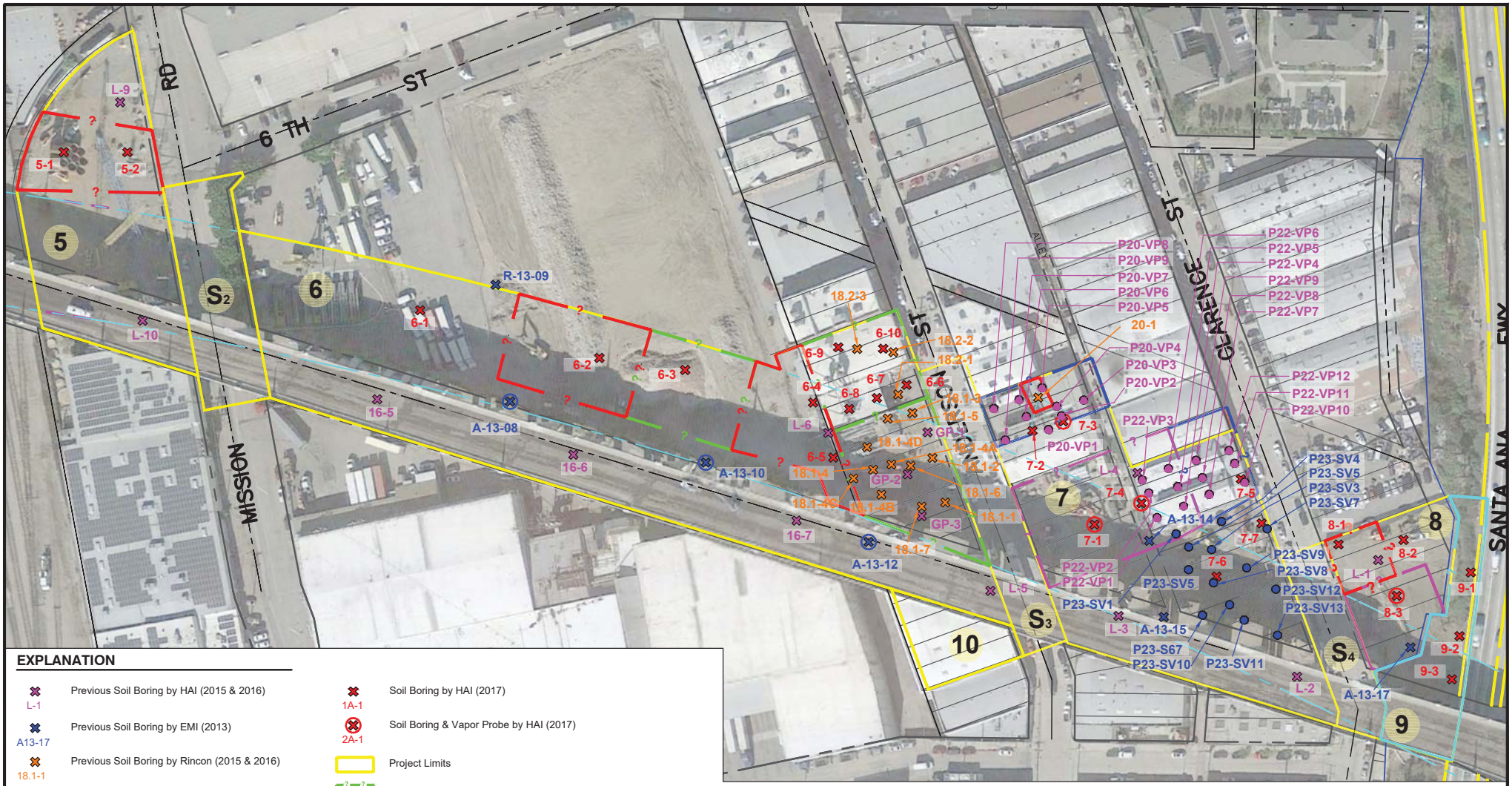
HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California

Project No. LAC-17-001

CONTAMINATION CATEGORIES WITH SOIL BORINGS AND VAPOR PROBES - WEST PARK

Figure **7a**



EXPLANATION

- L-1 — Previous Soil Boring by HAI (2015 & 2016)
- A13-17 — Previous Soil Boring by EMI (2013)
- 18.1-1 — Previous Soil Boring by Rincon (2015 & 2016)
- P22-VP12 — Previous Vapor Probe by HAI (2015 & 2016)
- P23-SV13 — Previous Vapor Probe by EMI (2014)
- P32-VMW1 — Previous Soil Boring & Vapor Probe by HAI (2016)
- 1A-1 — Soil Boring by HAI (2017)
- 2A-1 — Soil Boring & Vapor Probe by HAI (2017)
- Project Limits
- Category 1a: RCRA Hazardous Zone
- Category 2a: Non-RCRA Hazardous Zone
- Category 2b: Soil Gas & Non-RCRA Hazardous Zone
- Category 3: Soil Gas Only Zone
- Aerially Deposited Lead Zone
- 1A — PARC Area Designation

0 100 200 FEET
APPROXIMATE SCALE

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

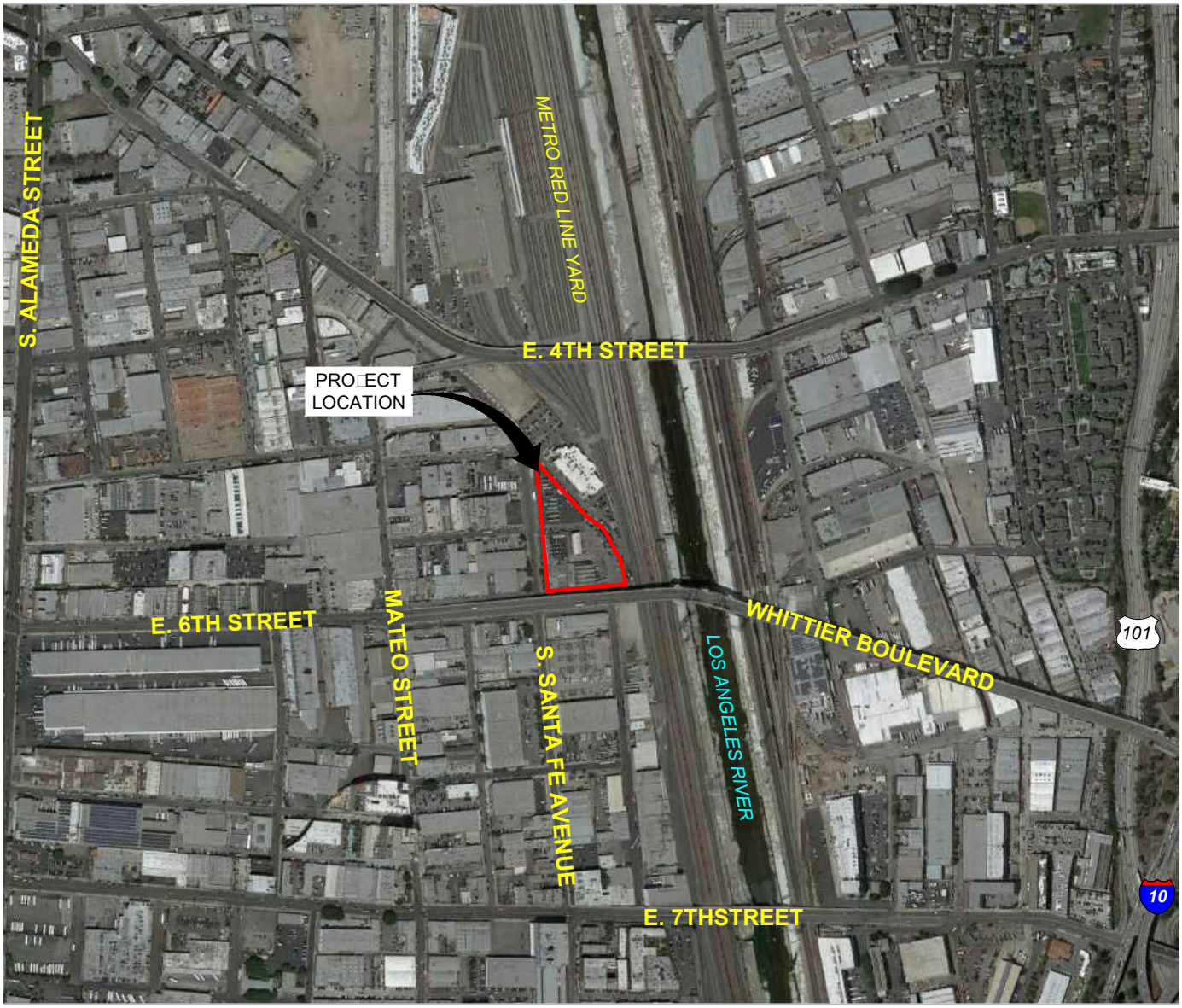
SIXTH STREET VIADUCT PARC IMPROVEMENTS
Los Angeles, California
Project No. LAC-17-001

CONTAMINATION CATEGORIES WITH SOIL BORINGS AND VAPOR PROBES - EAST PARK

Figure **7b**

ATTACHMENT B

Figures from Arcadis (2015)



MAP SOURCE: Google Earth Pro™ 2015, 34.040221°N, -118.229973°W

0 750' 1500'

GRAPHIC SCALE

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

SITE LOCATION MAP

ARCADIS

FIGURE 1

CITY:COSTA MESA DIV/GROUP:ENV_CAD DB:ENV_CAD
G:\ENVCAD\Irvine\ACT\LO493801\0000\00012\LO493801.0000 Site.dwg LAYOUT: 5 SAVED: 4/27/2015 12:02 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 4/27/2015 12:12 PM BY: LOVING, JEFF

PALMETTO STREET

SANTA FE AVENUE

LUCKY BRAND, INC.

FORMER BUILDING 32

MW-1B

189

MW-18

188

NORTH UST AREA

FORMER RAILROAD TRACK

FORMER BUILDING 30

MW-5A

MW-5

MW-8

190

MW-14

RECENTLY IDENTIFIED UST

MW-9

FORMER BUILDING 28

FORMER ABOVEGROUND STORAGE TANK AREA

FORMER UST (POSSIBLE LOCATION)

MW-15

MW-3

MW-2B

DTSC-8 (NOV 2013)			
DEPTH	1,1,1-TCA	1,1-DCA	1,1-DCE
5	**3.9**	**0.29**	**0.045**
15	**2.4**	**0.73**	**0.12**
30	**1.8**	**0.39**	**0.046**
45-1PV	**0.82**	**0.28**	**0.052**
45-3PV	**0.93**	**0.25**	**0.052**
45-10PV	**1.2**	**0.29**	**0.061**

SVA-3 (NOV 2013)			
DEPTH	1,1,1-TCA	1,1-DCA	1,1-DCE
5	**3.5**	**0.14**	**0.031**
15	**1.5**	**0.21**	**0.032**

MW-4

MW-10			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
DEC 2012	<1	**2.9**	<1
OCT 2013	<1	**1.9**	<1

FORMER ELECTRICAL SWITCH GEAR ROOM

FORMER OFFICE

UST

VP-25			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
2003	**9.5**	**1200**	**65**

WILLOW STREET

MW-17

BUILDING 34

VP-24			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
2003	**16**	**1700**	**89**

BUILDING 3 FORMER MIXING AND MANUFACTURING ROOM

WASHING AREA

VP-25

VP-24

MW-13			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
DEC 2012	<1	**4.1**	<1
OCT 2013	<1	**2.9**	<1

MW-13

MW-6

SVA-3

DTSC-8

UST NO. 124

MW-10

VP-23			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
2003	**610**	**6.6**	**16**

UST NO. 125

BUILDING 4 FORMER STORAGE

VP-23

VP-22

VP-22			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
2003	**610**	**8.2**	**14**

FORMER DEVELOPMENT LAB

FORMER LUNCH ROOM

FORMER PIPING

FORMER EMPTY DRUM STORAGE

DTSC-9 (11/25/13)			
DEPTH	1,1,1-TCA	1,1-DCA	1,1-DCE
5	**0.69**	**0.053**	<0.02
15	**0.92**	**0.092**	<0.02
30	**0.83**	**0.14**	**0.05**
45	**1.9**	**0.47**	**0.11**
45-REP	**2.0**	**0.45**	**0.12**

187

SANTA FE AVENUE

FORMER SHIPPING AND RECEIVING

DTSC-9

MW-12

MW-11

MW-7

FORMER OFFICE

FORMER SOUTH UST AREA

FORMER DOCK LOADING/UNLOADING

189

190

186

188

MESQUIT AVENUE

6th STREET VIADUCT

187

185

MW-16			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
DEC 2012	<1	**2.5**	<1
OCT 2013	<1	**6.4**	<1

MW-12			
DATE	1,1,1-TCA	1,1-DCA	1,1-DCE
DEC 2012	<1	**2.7**	<1
OCT 2013	<1	**2.7**	<1

186

185

MESQUIT AVENUE

MESQUIT AVENUE

MW-16

0 75' 150'

GRAPHIC SCALE

LEGEND:

- SITE BOUNDARY
- MW-11 — GROUNDWATER MONITORING WELLS
- MW-7 — ABANDONED GROUNDWATER MONITORING WELLS
- DTSC-4 — SOIL BORING WITH VAPOR PROBE
- DTSC-5 — SOIL BORING WITH GROUNDWATER GRAB SAMPLE
- SVA-3 — SOIL VAPOR PROBE
- VP-24 — VAPOR PROBE
- DIRECTION OF GROUNDWATER FLOW
- 185 — GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- EXISTING UST (ABANDONED IN PLACE)
- FORMER BUILDING, UST, OR OTHER SITE FEATURE

ALL SOIL GAS AND GROUNDWATER DATA REPORTED IN MICROGRAMS PER LITER (µg/L)

SOURCE: AVOCET ENVIRONMENTAL, INC.; FIGURE 2, "SITE PLAN SHOWING RECENT BORINGS, SOIL VAPOR PROBES, GEOPHYSICAL SURVEY AREAS, TRENCHES ABS UST LOCATIONS", 2/10/2014

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

SUMMARY OF DETECTED CHLORINATED VOCs IN SOIL GAS AND GROUNDWATER

ARCADIS

FIGURE 5

CITY:COSTA MESA DIV/GROUP:ENV_CAD DB:ENV_CAD
G:\ENVCAD\Irvine\ACT\LO493801\0000\00012\LO493801.0000 Site.dwg LAYOUT: 6 SAVED: 4/27/2015 12:02 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 4/27/2015 12:11 PM BY: LOVING, JEFF

PALMETTO STREET

SANTA FE AVENUE

LUCKY BRAND, INC.

SBA–7 (11/21/2013)		
DEPTH	ANALYTE	CONC.
5’	Total TPH	4900
10’	Total TPH	21000
12’	Total TPH	34000
15’	Total TPH	<5

SBA-7

NORTH UST AREA

SVA-6

FORMER BUILDING 32

SSA-1

DTSC-11

DTSC-1

SBA-2

FORMER RAILROAD TRACK

SBA-3

FORMER BUILDING 30

SBA-1

SSA-2

DTSC-2

SVA-1

DTSC-3

RECENTLY IDENTIFIED UST

DTSC-2A

FORMER BUILDING 28

FORMER ABOVEGROUND STORAGE TANK AREA

SVA-8

FORMER UST (POSSIBLE LOCATION)

SVA-7

SSA-3

SBA-8

WAREHOUSE FACILITY

DTSC-4

SSA-5

SSA-4

FORMER ELECTRICAL SWITCH GEAR ROOM

FORMER OFFICE

WILLOW STREET

SVA-4

SSA-7

SSA-6

UST

BUILDING 34

SSA-8

BUILDING 3 FORMER MIXING AND MANUFACTURING ROOM

SVA-12

SSA-10

SBA-9

SBA-10

FORMER MIXING POT WASHING AREA

SSA-14

SBA-12

SVA-10

SVA-3

HA-4

SSA-9

SVA-9

SBA-11

SBA-6

HA–4 (1/1/1991)		
DEPTH	ANALYTE	CONC.
5’	Lead	650

UST NO. 124

UST NO. 125

SVA-11

SSA-15

BUILDING 4 FORMER STORAGE

SSA-12

SSA–13 (12/20/2013)		
DEPTH	ANALYTE	CONC.
3’	Benzene	4.4
3’	Naphthalene	300
3’	Benzo(a)pyrene	370
3’	Benzo(a)anthracene	460
3’	Benzo(k)fluoranthene	320
3’	Chrysene	440
3’	Lead	717
3’	Total TPH	120000

HA–3 (1/1/1991)		
DEPTH	ANALYTE	CONC.
5’	Lead	665

HA-3

SBA-13

SBA-15

SSA-13

FORMER DEVELOPMENT LAB

SBA-14

FORMER PIPING

FORMER EMPTY DRUM STORAGE

SBA-16

FORMER LUNCH ROOM

DTSC-5

SVA-13

SSA-16

SVA-17

SSA-17

SSA-18

SVA-14

SVA-5

DTSC-9

SSA-20

SBA–14 (11/20/2013)		
DEPTH	ANALYTE	CONC.
5’	Cadmium	179
5’	Lead	4780

SANTA FE AVENUE

DTSC-7

DTSC-10

FORMER SHIPPING AND RECEIVING

SVA-2A

SVA-2

SVA-16

SBA-17

SSA-19

SBA-4

SVA-15

FORMER OFFICE

SBA-5

FORMER DOCK LOADING/UNLOADING

FORMER SOUTH UST AREA

DTSC-6

MESQUIT AVENUE

6th STREET VIADUCT

MESQUIT AVENUE

MESQUIT AVENUE

0 75' 150'

GRAPHIC SCALE

LEGEND:

- SITE BOUNDARY
- SBA-1 SHALLOW SOIL BORING
- SSA-2 SOIL BORING
- DTSC-4 SOIL BORING WITH VAPOR PROBE- SHALLOW
- DTSC-5 SOIL BORING WITH GROUNDWATER GRAB SAMPLE
- DTSC-11 SOIL BORING WITH VAPOR PROBE- DEEP
- HA-3 HAND AUGER
- EXISTING UST (ABANDONED IN PLACE)
- FORMER BUILDING, UST, OR OTHER SITE FEATURE

ALL DATA IS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SOURCE:
AVOCET ENVIRONMENTAL, INC.; FIGURE 2, "SITE PLAN SHOWING RECENT BORINGS, SOIL VAPOR PROBES, GEOPHYSICAL SURVEY AREAS, TRENCHES ABS UST LOCATIONS", 2/10/2014

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

SHALLOW SOIL IMPACTED AREAS (UPPER 15 FEET)

ARCADIS

FIGURE
6

CITY:COSTA MESA DIV/GROUP:ENV_CAD DB:ENV_CAD
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PALMETTO STREET

SANTA FE AVENUE

LUCKY BRAND, INC.

FORMER BUILDING 32

DTSC–1			
ft bgs	T	E	X
55	96,000	6,600	34,000
60	1,100	––	––
55	18,000	––	––

NORTH UST AREA

DTSC-11

DTSC-1

FORMER RAILROAD TRACK

FORMER BUILDING 30

DTSC–2				
ft bgs	TPH	T	E	X
60	––	2,200,000	59,000	315,000
65	8,400,000	13,000,000	290,000	1,610,000
70	––	1,800,000	42,000	235,000

DTSC-2

DTSC-3

DTSC–3				
ft bgs	TPH	T	E	X
55	3,300,000	2,500,000	31,000	195,000
60	––	33,000	––	––
65	––	––	600,000	3,630,000

DTSC-2A

FORMER BUILDING 28

FORMER ABOVEGROUND STORAGE TANK AREA

RECENTLY IDENTIFIED UST

FORMER UST (POSSIBLE LOCATION)

WAREHOUSE FACILITY

DTSC-4

DTSC–4	
ft bgs	T
55	7,500

FORMER ELECTRICAL SWITCH GEAR ROOM

FORMER OFFICE

UST

WILLOW STREET

BUILDING 3 FORMER MIXING AND MANUFACTURING ROOM

BUILDING 34

FORMER MIXING POT WASHING AREA

DTSC-8

DTSC–5				
ft bgs	B	T	E	N
50	––	––	––	5,200
55	150	1,900	––	8,300
60	––	290,000	2,100	––
65	––	9,900	––	––
70	––	2,400	––	––

UST NO. 124

UST NO. 125

FORMER DEVELOPMENT LAB

BUILDING 4 FORMER STORAGE

FORMER PIPING

FORMER EMPTY DRUM STORAGE

FORMER LUNCH ROOM

DTSC-5

DTSC–10			
ft bgs	MIBK	N	T
45	4,900	98,000	1,800

DTSC-7

DTSC-10

FORMER SHIPPING AND RECEIVING

DTSC-9

FORMER OFFICE

FORMER DOCK LOADING/UNLOADING

DTSC-6

FORMER SOUTH UST AREA

DTSC–6	
ft bgs	MIBK
50	15,000
55	1,300

MESQUIT AVENUE

6th STREET VIADUCT

MESQUIT AVENUE

MESQUIT AVENUE

0 75' 150'

GRAPHIC SCALE

LEGEND:

- SITE BOUNDARY
- SSA-2 — SOIL BORING
- DTSC-4 — SOIL BORING WITH VAPOR PROBE- SHALLOW
- DTSC-5 — SOIL BORING WITH GROUNDWATER GRAB SAMPLE
- DTSC-11 — SOIL BORING WITH VAPOR PROBE- DEEP
- EXISTING UST (ABANDONED IN PLACE)
- FORMER BUILDING, UST, OR OTHER SITE FEATURE
- LATERAL EXTENT OF DEEP VOC AND TPH IMPACTED SOIL (WHERE CHEMICALS EXCEED SOIL CLEANUP GOALS)

VOC - VOLATILE ORGANIC COMPOUND
TPH - TOTAL PETROLEUM HYDROCARBON
MIBK - METHYL ISBUTYL KETONE
T - BENZENE
B - TOLUENE
E - ETHYLBENZENE
X - XYLENES
N - NAPHTHALENE

SOURCE:
AVOCET ENVIRONMENTAL, INC.; FIGURE 2, "SITE PLAN SHOWING RECENT BORINGS, SOIL VAPOR PROBES, GEOPHYSICAL SURVEY AREAS, TRENCHES ABS UST LOCATIONS", 2/10/2014

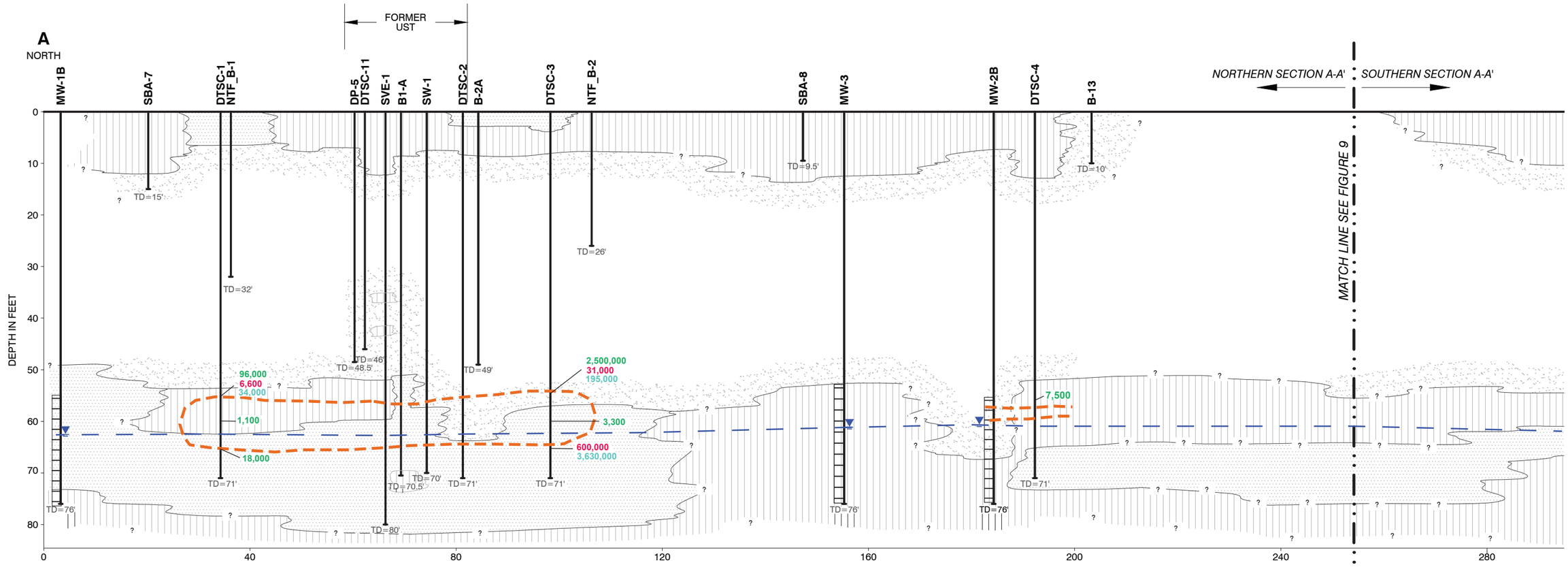
NOTES:
1. CHEMICAL CONCENTRATION DATA ARE ALSO SHOWN ON CROSS-SECTION FIGURES 8-11.
2. ONLY CONCENTRATIONS EXCEEDING CLEANUP GOALS ARE SHOWN ON FIGURE.
3. ALL CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L).

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

ESTIMATED LATERAL EXTENT OF DEEP VOC AND TPH IMPACTED SOIL

ARCADIS

FIGURE
7



0 20 40 FEET

VERTICAL AND HORIZONTAL SCALE

EXPLANATION

BORING OR GROUNDWATER MONITORING WELL

SCREENED INTERVAL

GROUNDWATER TABLE

TD=71' TD INDICATES TOTAL DEPTH IN FEET

EXTENT OF CHEMICALS OF CONCERN EXCEEDING CLEAN-UP GOALS

SOIL TYPES

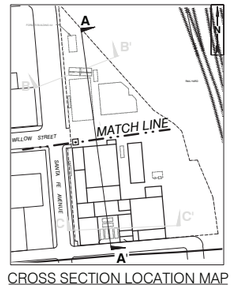
SM/ML ML/CL (FINES)

SW/GW SP/GP (GRAVEL AND SAND)

SP (SAND AND GRAVELLY SAND)

B – Benzene
T – Toluene
E – Ethylbenzene
X – Xylenes
MIBK – Methyl isobutylene ketone
N – Naphthalene

ALL RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM (µg/kg)



CROSS SECTION LOCATION MAP

SOURCE: AVOCET ENVIRONMENTAL, INC.

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

**CROSS SECTION A-A'
(NORTHERN SECTION)**

ARCADIS

FIGURE 8

032615

JDLOVING

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NORTHERN SECTION A-A' | SOUTHERN SECTION A-A'

MATCH LINE SEE FIGURE 8

A' SOUTH

FORMER USTs

MW-13 | SVA-10 | MW-6 | SVA-11 | B-16 | STF-B3 | DP-4 | SVA-17 | DTSC-5 | B-7 & DP-1 | B-5 | SVA-2 | STF_B-1 | DTSC-10 | B-6 | SBA-5 | STF-B2 | DTSC-6 | ℄

TD=15' | TD=15' | TD=15' | TD=15' | TD=15' | TD=48.5' | TD=46' | TD=54' | TD=56' | TD=64' | TD=71' | TD=70.5' | TD=70.5' | TD=71' | TD=70.5' | TD=71' | TD=81.5'

4,900
98,000

5,200
150
1,900
8,300

15,000

1,300

2,90,000
2,100

150
9,900

150
2,400

DEPTH IN FEET

0 10 20 30 40 50 60 70 80

240 280 320 360 400 440 480

DISTANCE IN FEET

0 20 40 FEET

VERTICAL AND HORIZONTAL SCALE

EXPLANATION

BORING OR GROUNDWATER MONITORING WELL

SCREENED INTERVAL

GROUNDWATER TABLE

TD=71' TD INDICATES TOTAL DEPTH IN FEET

EXTENT OF CHEMICALS OF CONCERN EXCEEDING CLEAN-UP GOALS

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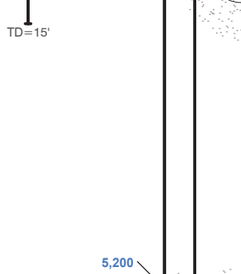
T – Toluene
E – Ethylbenzene
X – Xylenes
MIBK – Methyl isobutylene ketone
N – Naphthalene

ALL RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM (µg/kg)



CROSS SECTION LOCATION MAP

SOURCE: AVOCET ENVIRONMENTAL, INC.

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

CROSS SECTION A-A' (SOUTHERN SECTION)

ARCADIS

FIGURE 9

032615

JDLOVING

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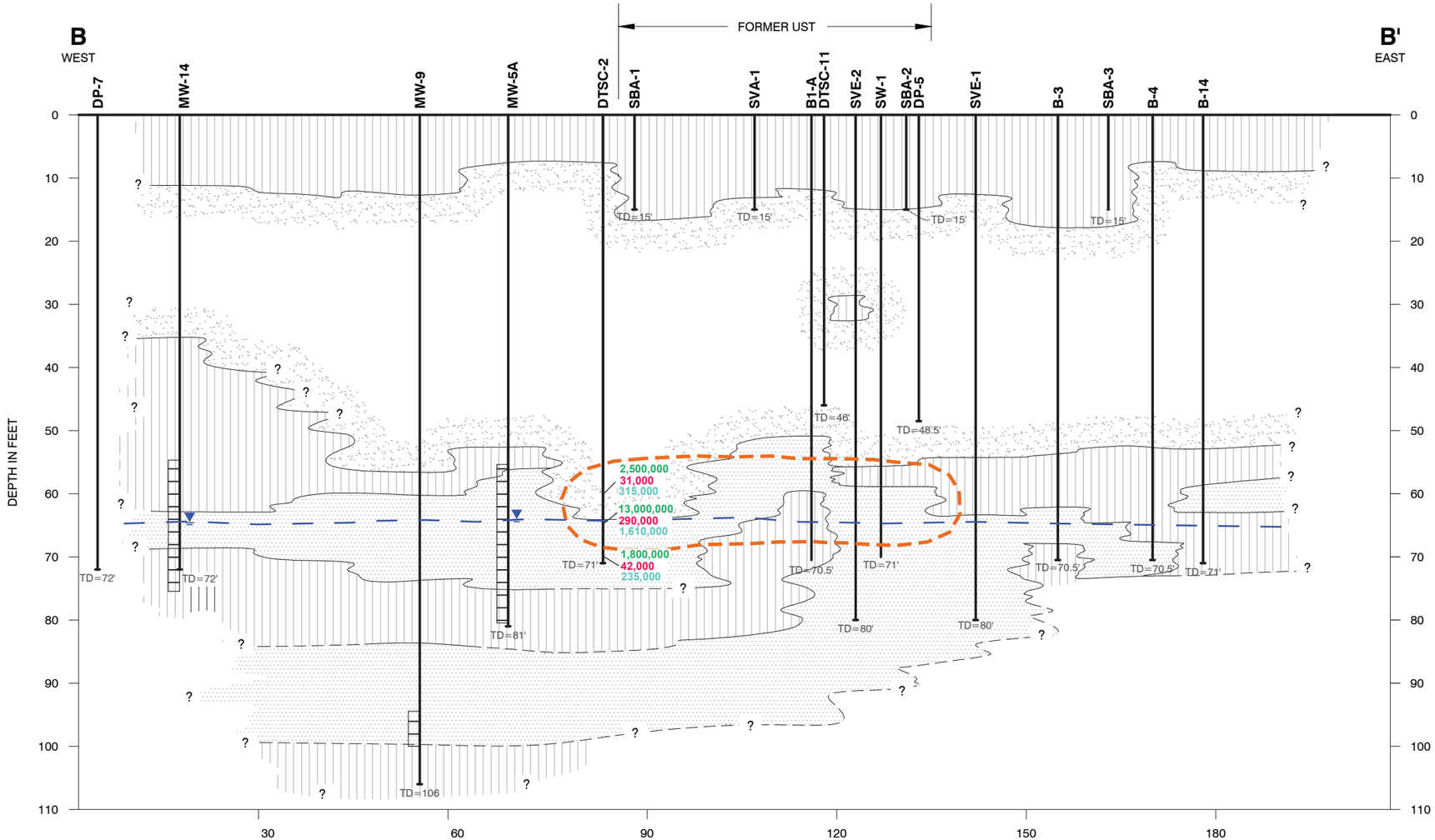

0 20 40 FEET

VERTICAL AND HORIZONTAL SCALE

EXPLANATION

BORING OR GROUNDWATER MONITORING WELL

SCREENED INTERVAL

GROUNDWATER TABLE

TD=71' TD INDICATES TOTAL DEPTH IN FEET

EXTENT OF CHEMICALS OF CONCERN EXCEEDING CLEAN-UP GOALS

SOIL TYPES

SM/ML ML/CL (FINES)

SW/GW SP/GP (GRAVEL AND SAND)

SP (SAND AND GRAVELLY SAND)

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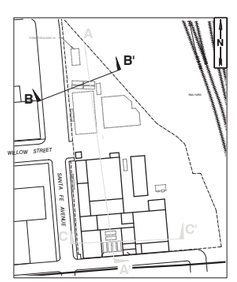
T – Toluene
E – Ethylbenzene
X – Xylenes
MIBK – Methyl isobutylene ketone
N – Naphthalene

ALL RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM (µg/kg)



CROSS SECTION LOCATION MAP

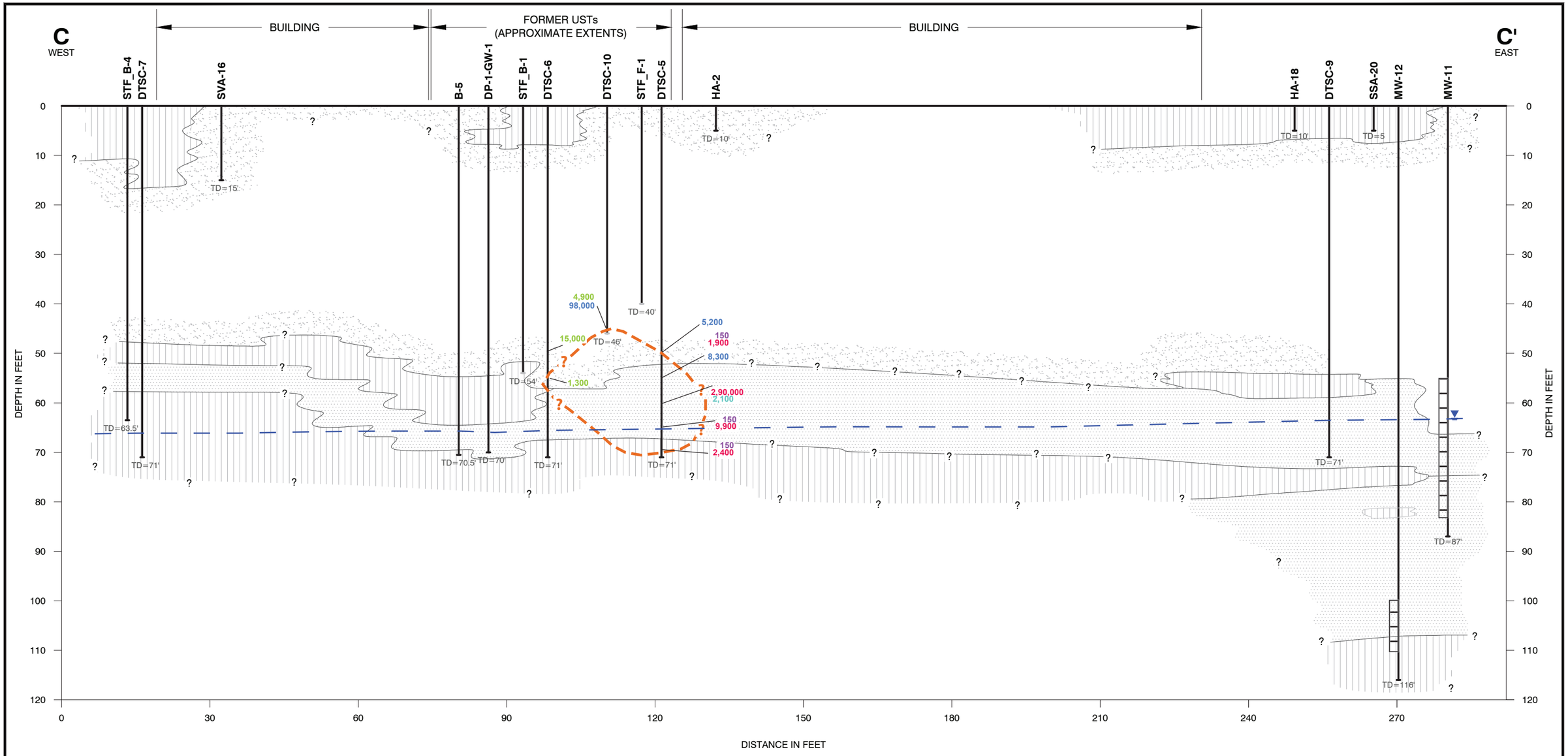
SOURCE: AVOCET ENVIRONMENTAL, INC.

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

CROSS SECTION B-B'

ARCADIS

FIGURE 10



EXPLANATION

BORING OR GROUNDWATER MONITORING WELL

SCREENED INTERVAL

GROUNDWATER TABLE

TD=71' TD INDICATES TOTAL DEPTH IN FEET

EXTENT OF CHEMICALS OF CONCERN EXCEEDING CLEAN-UP GOALS

SOIL TYPES

SM/ML ML/CL (FINES)

SW/GW SP/GP (GRAVEL AND SAND)

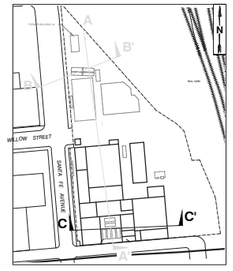
SP (SAND AND GRAVELLY SAND)

B – Benzene
T – Toluene
E – Ethylbenzene
X – Xylenes
MIBK – Methyl isobutylene ketone
N – Naphthalene

ALL RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM (µg/kg)

0 20 40 FEET

VERTICAL AND HORIZONTAL SCALE



CROSS SECTION LOCATION MAP

SOURCE: AVOCET ENVIRONMENTAL, INC.

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

CROSS SECTION C-C'

ARCADIS

FIGURE 11

032615

JDLOVING

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CITY:COSTA MESA DIV/GROUP:ENV_CAD DB:ENV_CAD
G:\ENVCAD\Irvine\ACT\LO493801\0000\00012\LO493801.0000 Site.dwg LAYOUT: 12 SAVED: 7/14/2015 4:24 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 7/14/2015 5:21 PM BY: LOVING, JEFF

DTSC–2			
TPH–g	NA	1,1–DCA	<2,000
Benzene	<1,000	1,1–DCE	<2,000
Toluene	**270,000**	1,2,4–TMB	<2,000
Ethylbenz	<2,000	1,3,5–TMB	<2,000
Xylenes	**10,600**	MIBK	<20,000

MW–1B			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

DTSC–1			
TPH–g	NA	1,1–DCA	<1,000
Benzene	<500	1,1–DCE	<1,000
Toluene	**170,000**	1,2,4–TMB	<1,000
Ethylbenz	**5,100**	1,3,5–TMB	<1,000
Xylenes	**30,500**	MIBK	<10,000

DTSC–3			
TPH–g	NA	1,1–DCA	<500
Benzene	<250	1,1–DCE	<500
Toluene	**93,000**	1,2,4–TMB	<500
Ethylbenz	**2,500**	1,3,5–TMB	<500
Xylenes	**14,700**	MIBK	<5,000

MW–5A			
TPH–g	**127,000**	1,1–DCA	<100
Benzene	**92**	1,1–DCE	<100
Toluene	**180,000**	1,2,4–TMB	<100
Ethylbenz	**1,000**	1,3,5–TMB	<100
Xylenes	**4,800**	MIBK	<100

MW–8			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

MW–18			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<2

MW–2B			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	75	1,2,4–TMB	<1
Ethylbenz	1.5	1,3,5–TMB	<1
Xylenes	19.5	MIBK	<1

MW–14			
TPH–g	**25,800**	1,1–DCA	<500
Benzene	<250	1,1–DCE	<500
Toluene	**46,000**	1,2,4–TMB	<500
Ethylbenz	**600**	1,3,5–TMB	<500
Xylenes	**1,930**	MIBK	<500

DTSC–4			
TPH–g	NA	1,1–DCA	<20
Benzene	<10	1,1–DCE	<20
Toluene	**2,200**	1,2,4–TMB	<20
Ethylbenz	210	1,3,5–TMB	<20
Xylenes	1,230	MIBK	<200

MW–9			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

MW–4			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

MW–15			
TPH–g	**470**	1,1–DCA	<5
Benzene	**30**	1,1–DCE	<5
Toluene	**740**	1,2,4–TMB	<5
Ethylbenz	150	1,3,5–TMB	<5
Xylenes	98	MIBK	<5

MW–10			
TPH–g	<50	1,1–DCA	1.9
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

MW–17			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

DTSC–8			
TPH–g	NA	1,1–DCA	3.6
Benzene	<0.5	1,1–DCE	<1
Toluene	84	1,2,4–TMB	1.4
Ethylbenz	2.3	1,3,5–TMB	<1
Xylenes	13.6	MIBK	<10

MW–3			
TPH–g	<50	1,1–DCA	1.2
Benzene	<0.5	1,1–DCE	<1
Toluene	3.3	1,2,4–TMB	<1
Ethylbenz	1.1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

DTSC–9			
TPH–g	NA	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	7.6	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<10

MW–13			
TPH–g	<50	1,1–DCA	2.9
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

MW–6
Not Sampled – Obstructed

DTSC–7			
TPH–g	NA	1,1–DCA	3.9
Benzene	<0.5	1,1–DCE	<1
Toluene	14	1,2,4–TMB	8.9
Ethylbenz	<1	1,3,5–TMB	3.1
Xylenes	1.5	MIBK	<10

MW–11			
TPH–g	<50	1,1–DCA	2.7
Benzene	<0.5	1,1–DCE	1.2
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

DTSC–5			
TPH–g	NA	1,1–DCA	<250
Benzene	<125	1,1–DCE	<250
Toluene	**41,000**	1,2,4–TMB	1,300
Ethylbenz	<250	1,3,5–TMB	340
Xylenes	**1,080**	MIBK	4,500

MW–12			
TPH–g	<50	1,1–DCA	<1
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

MW–16			
TPH–g	<50	1,1–DCA	**7.4**
Benzene	<0.5	1,1–DCE	<1
Toluene	<1	1,2,4–TMB	<1
Ethylbenz	<1	1,3,5–TMB	<1
Xylenes	<2	MIBK	<1

DTSC–6			
TPH–g	NA	1,1–DCA	<200
Benzene	<100	1,1–DCE	<200
Toluene	**8,700**	1,2,4–TMB	26,000
Ethylbenz	**570**	1,3,5–TMB	8,300
Xylenes	**4,100**	MIBK	38,000

SANTA FE AVENUE
LUCKY BRAND, INC.
FORMER BUILDING 32
MW-1B
DTSC-1
NORTH UST AREA
FORMER RAILROAD TRACK
FORMER BUILDING 30
MW-5A
MW-5
DTSC-2
DTSC-3
MW-8
MW-14
RECENTLY IDENTIFIED UST
FORMER BUILDING 28
FORMER ABOVEGROUND STORAGE TANK AREA
MW-9
FORMER UST (POSSIBLE LOCATION)
WAREHOUSE FACILITY
MW-15
MW-3
MW-2B
DTSC-4
MW-4
FORMER ELECTRICAL SWITCH GEAR ROOM
FORMER OFFICE
UST
BUILDING 34
WILLOW STREET
MW-17
BUILDING 3 FORMER MIXING AND MANUFACTURING ROOM
MW-13
MW-6
UST NO. 124
UST NO. 125
MW-10
DTSC-8
BUILDING 4 FORMER STORAGE
FORMER DEVELOPMENT LAB
FORMER LUNCH ROOM
DTSC-5
FORMER PIPING
FORMER EMPTY DRUM STORAGE
FORMER SHIPPING AND RECEIVING
DTSC-9
MW-12
MW-11
SANTA FE AVENUE
DTSC-7
MW-7
FORMER OFFICE
FORMER DOCK LOADING/UNLOADING
DTSC-6
FORMER SOUTH UST AREA
MESQUIT AVENUE
6th STREET VIADUCT
MW-16
MESQUIT AVENUE
0 75' 150'
GRAPHIC SCALE

LEGEND:

- SITE BOUNDARY
- MW-11 GROUNDWATER MONITORING WELLS
- MW-7 ABANDONED GROUNDWATER MONITORING WELLS
- DTSC-5 SOIL BORING WITH GROUNDWATER GRAB SAMPLE
- DTSC-4 SOIL BORING WITH VAPOR PROBE
- EXISTING UST (ABANDONED IN PLACE)
- FORMER BUILDING, UST, OR OTHER SITE FEATURE
- ESTIMATED EXTENT OF PETROLEUM IMPACTED GROUNDWATER

- ETHYLBENZ = ETHYLBENZENE
- ALL DATA PRESENTED IN MICROGRAMS PER LITER (µg/L)
- DATA ARE FROM GROUNDWATER SAMPLES COLLECTED IN OCTOBER AND NOVEMBER, 2013
- **BOLD** CONCENTRATIONS EXCEED STATE MCLs

SOURCE: AVOCET ENVIRONMENTAL, INC.; FIGURE 2, "SITE PLAN SHOWING RECENT BORINGS, SOIL VAPOR PROBES, GEOPHYSICAL SURVEY AREAS, TRENCHES ABS UST LOCATIONS", 2/10/2014

BUTTERFIELD PROPERTY
590 SOUTH SANTA FE AVENUE
LOS ANGELES, CALIFORNIA

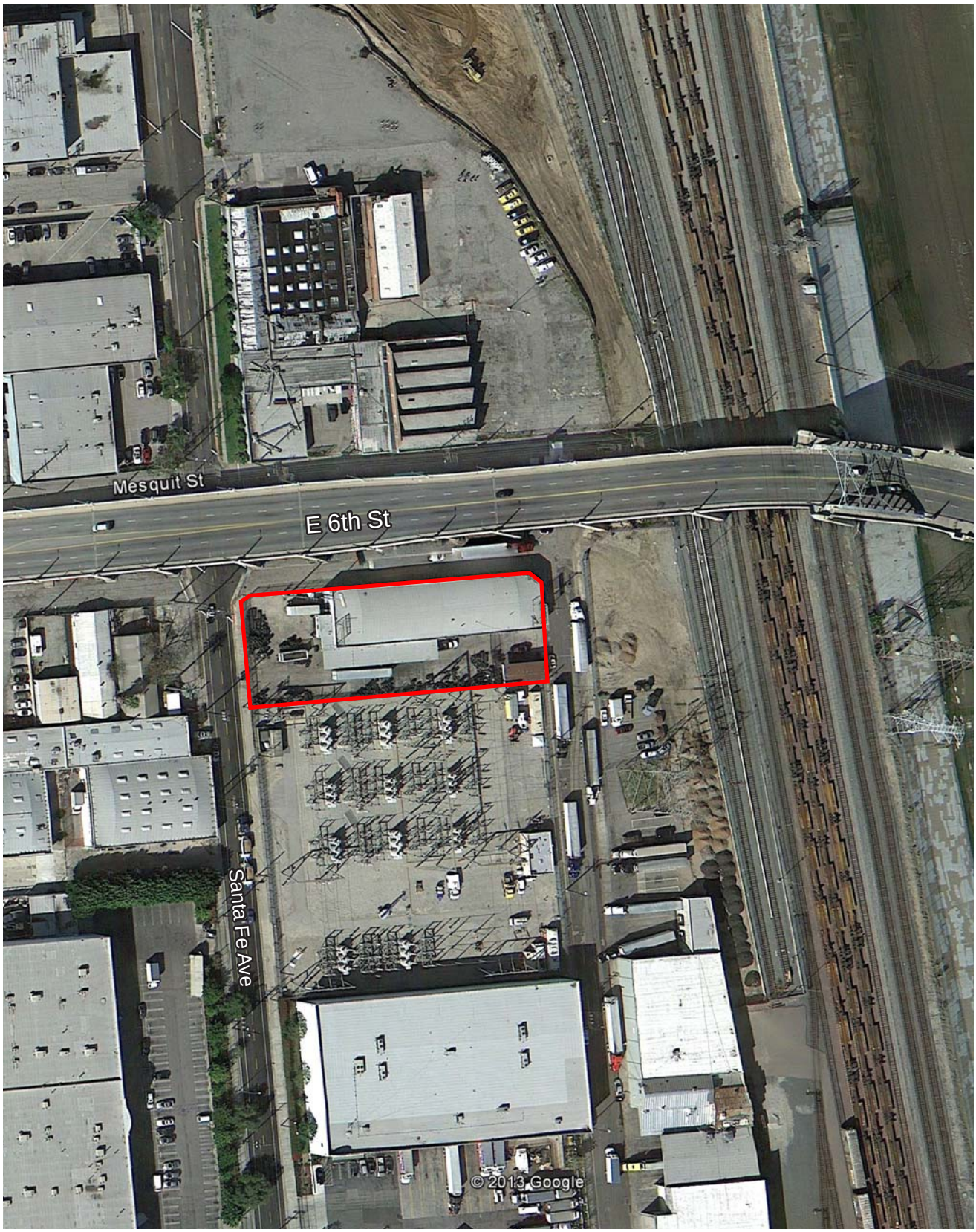
ESTIMATED LATERAL EXTENT OF VOC AND TPH IMPACTED GROUNDWATER

ARCADIS

FIGURE 12

ATTACHMENT C

Figure from CH2M-Hill, 2013a



Legend:

Project Site

North

0 300

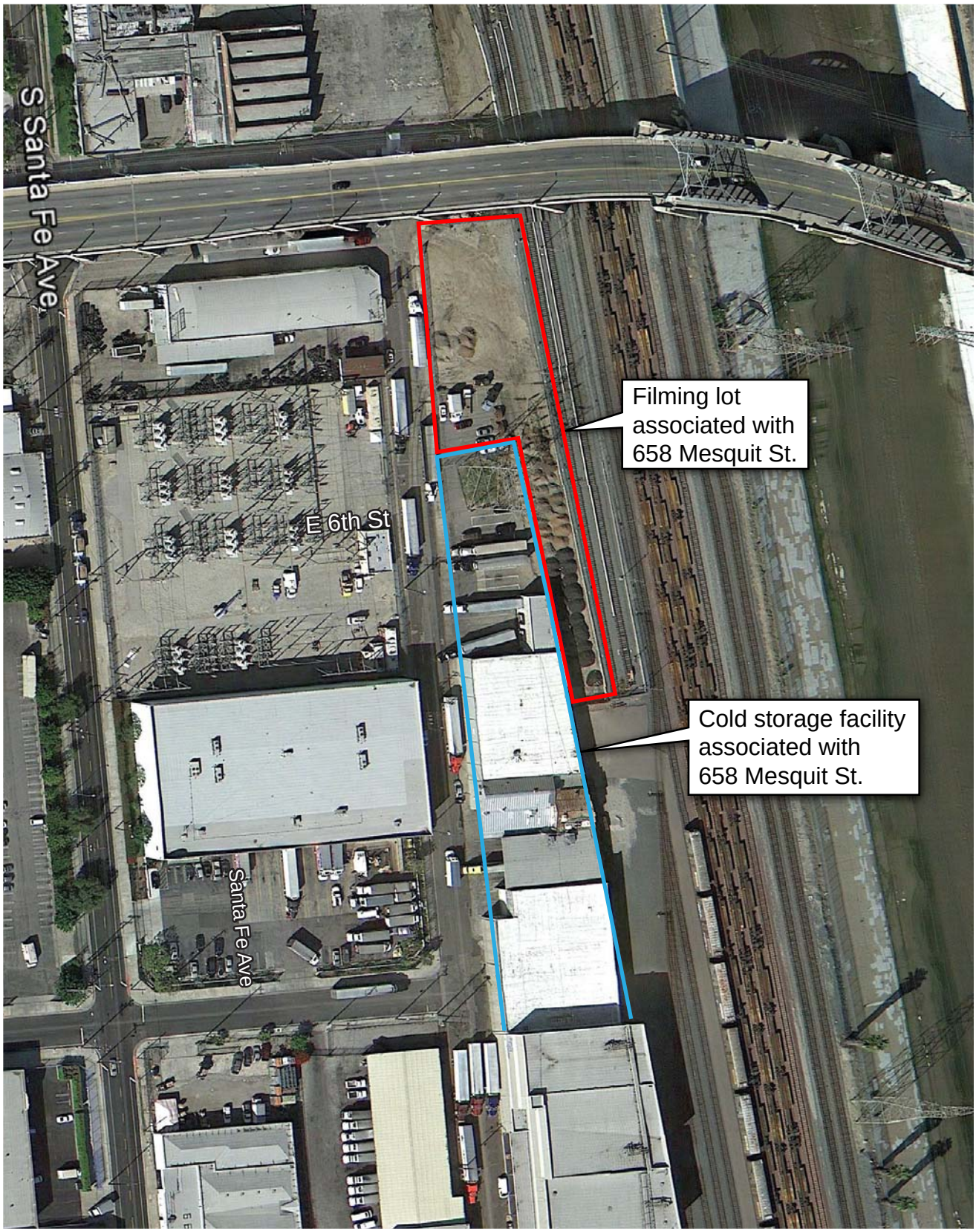
Approximate scale in feet

FIGURE 2-1
Site Map
Phase I Environmental Site Assessment
Park Property
600 South Sante Fe Avenue, Los Angeles, CA
6th Street Viaduct Replacement Project

Aerial image © Google Earth, 2013. Annotation by CH2M HILL, 2013.

ATTACHMENT D

Figure from CH2M-Hill, 2013b



Legend:

Project Site

North

0 300

Approximate scale in feet

FIGURE 2-1
Site Map
Phase I Environmental Site Assessment
Gallo Property
658 Mesquit Street, Los Angeles, CA
6th Street Viaduct Replacement Project

Aerial image © Google Earth, 2013. Annotation by CH2M HILL, 2013.

ATTACHMENT E

Figure from CH2M-Hill, 2013c

Legend:

Project Site

0 300

Approximate scale in feet

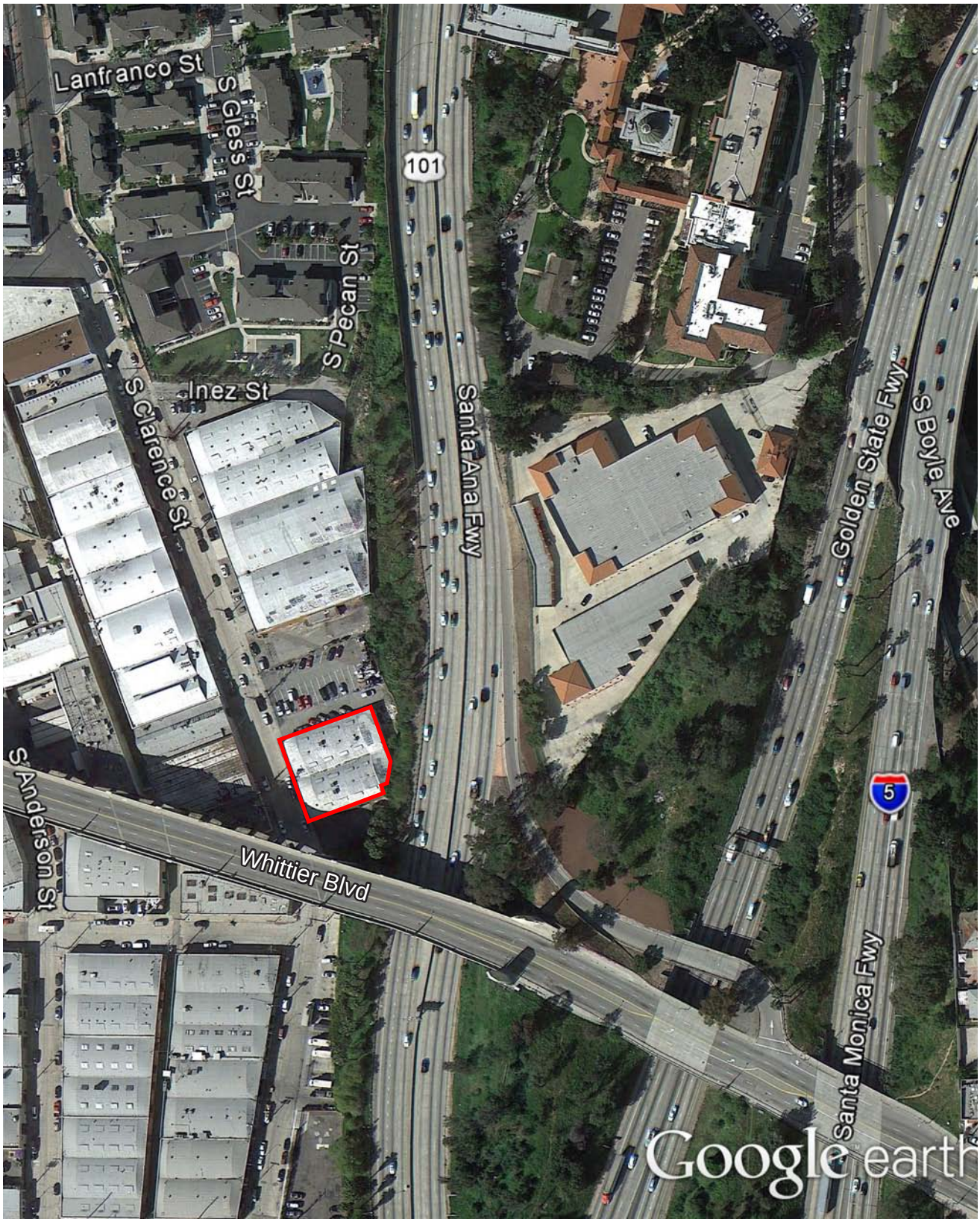
North

FIGURE 2-1
Site Map
Phase I Environmental Site Assessment
Parcel 16A
1600 East 6th St., Los Angeles, CA
6th Street Viaduct Replacement Project

Aerial image © Google Earth, 2012. Annotation by CH2M HILL, 2013.

ATTACHMENT F

Figure from CH2M-Hill, 2012



Legend:

Project Site (located beneath Whittier Blvd)

0 300

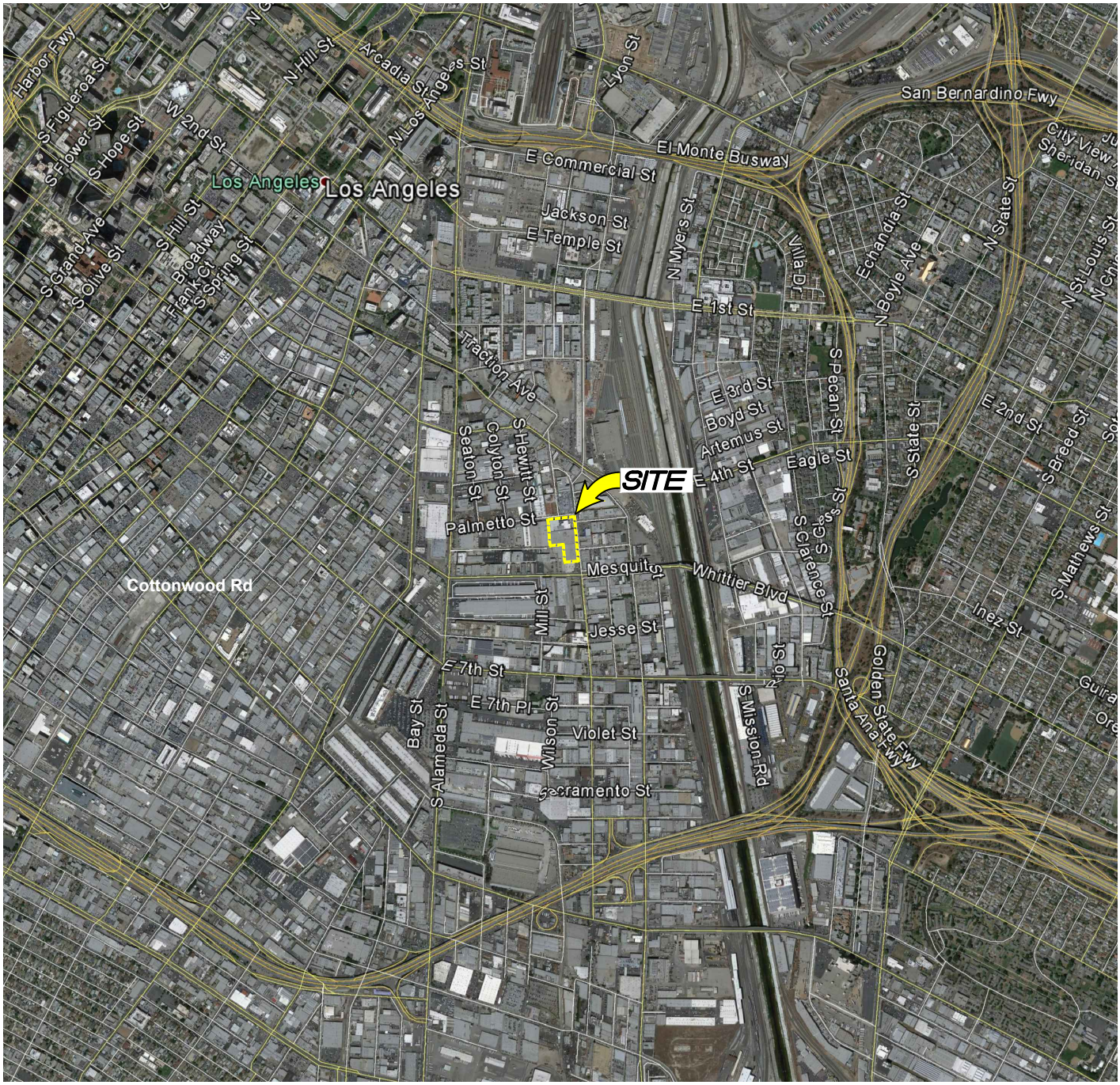
Approximate scale in feet

North

FIGURE 2-1
Site Map
Phase I Environmental Site Assessment
650 South Clarence Street, Los Angeles, CA
6th Street Viaduct Replacement Project

ATTACHMENT G

Figure from Kleinfelder, 2015



SOURCE: GOOGLE EARTH PRO 2014, IMAGE DATE 4/16/13.

N

2,000 1,000 0 2,000

APPROXIMATE SCALE (feet)

ATTACHED IMAGES: Image: Aerial - Image_Project_3000_4-16-13.jpg
ATTACHED XREFS:
RIVERSIDE, CALIFORNIA CAD FILE: L:\CADD\2015\20154388\ LAYOUT: 1
PLOTTED: 29 May 2015, 2:29pm, MGriffin

KLEINFELDER
Bright People. Right Solutions.
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PROJECT NO.	20154388
DRAWN:	05/2015
DRAWN BY:	DMF
CHECKED BY:	BR
FILE NAME:	20154388_F1.dwg

SITE LOCATION MAP

AT MATEO
555 MATEO STREET
LOS ANGELES, CALIFORNIA

FIGURE
1

ATTACHMENT H

Tables for PARC Area 1A

TABLE H-1

Soil Summary for PARC Area 1A - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
1A-1	1A-1-0.5	05/15/2017	0.5	3.8	2.1	200	ND	1.9	17	2.9	5.6	230	860	0.91	ND	11	ND	ND	ND	23	240
	1A-1-1.0	05/15/2017	1.0	ND	ND	99	ND	ND	9.7	-	5.1	46	230	ND	ND	6.8	ND	ND	ND	20	130
	1A-1-3.0	05/15/2017	3.0	3.3	1.3	97	ND	ND	19	ND	4.8	100	440	0.12	1.2	8.4	ND	ND	ND	19	170
	1A-1-5.0	05/15/2017	5.0	ND	ND	33	ND	ND	4.4	-	3.5	4.5	1.1	ND	ND	2.8	ND	ND	ND	14	15
1A-2	1A-2-0.5	05/15/2017	0.5	ND	2.3	310	ND	ND	15	-	6.3	50	310	0.45	ND	11	ND	ND	ND	25	480
	1A-2-1.0	05/15/2017	1.0	ND	1.2	63	ND	ND	7.9	-	5.5	9.2	15	0.2	ND	5.8	ND	ND	ND	22	45
	1A-2-3.0	05/15/2017	3.0	ND	ND	39	ND	ND	4.9	-	3.7	4.2	1.1	ND	ND	3.1	ND	ND	ND	17	16
	1A-2-5.0	05/15/2017	5.0	ND	1.7	120	ND	ND	13	-	9.0	18	3.2	0.17	ND	9.9	ND	ND	ND	26	45
1A-3	1A-3-0.5	05/15/2017	0.5	ND	2.2	120	ND	ND	15	-	6.1	48	140	0.18	ND	9.2	ND	ND	ND	23	130
	1A-3-1.0	05/15/2017	1.0	ND	ND	130	ND	ND	11	-	6.5	26	130	0.2	ND	10	ND	ND	ND	27	150
	1A-3-3.0	05/15/2017	3.0	ND	ND	68	ND	ND	7.7	-	5.4	6.9	1.5	ND	ND	5.1	ND	ND	ND	20	25
	1A-3-5.0	05/15/2017	5.0	ND	ND	35	ND	ND	4.7	-	3.4	3.9	ND	ND	ND	3.1	ND	ND	ND	14	17
1A-4	1A-4-0.5	05/15/2017	0.5	ND	3.4	100	ND	ND	15	-	6.8	43	140	0.22	ND	11	ND	ND	ND	26	210
	1A-4-1.0	05/15/2017	1.0	ND	ND	83	ND	ND	14	-	8.0	16	4.2	ND	ND	9.0	ND	ND	ND	29	39
	1A-4-3.0	05/15/2017	3.0	ND	ND	66	ND	ND	9.0	-	6.6	11	1.9	ND	ND	6.3	ND	ND	ND	24	29
	1A-4-5.0	05/15/2017	5.0	ND	ND	55	ND	ND	7.7	-	5.7	7.7	1.7	ND	ND	5.4	ND	ND	ND	19	26
L7	L-7 @ 1'	02/1/2016	1.0	3.5	3.7	150	ND	3.4	17	-	5.4	100	290	0.2	ND	13	ND	ND	ND	24	200
	L-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L8	L-8 @ 1'	02/1/2016	1.0	ND	2.1	91	ND	ND	9.9	-	5.2	15	32	ND	ND	7.4	ND	ND	ND	25	59
	L-8 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-8 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-11	L-11 @ 1'	02/1/2016	1.0	3.9	8.8	600	ND	3.1	25	-	6.6	170	690	3.3	ND	21	ND	ND	ND	27	1500
	L-11 @ 3'	02/1/2016	3.0	ND	1.8	73	ND	ND	8.0	-	4.6	9.8	2.5	0.1	ND	6.1	ND	ND	ND	21	30
	L-11 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-12	L-12 @ 1'	02/1/2016	1.0	ND	2.7	85	ND	ND	8.4	-	4.7	15	76	0.13	ND	6.5	ND	ND	ND	22	76
	L-12 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The Fehling Group, LLC

TABLE H-1

Soil Summary for PARC Area 1A - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
L7	L-7 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-7 @ 2'	02/26/2016	2.0	*ND*	3.0	100	*ND*	*ND*	14	-	8.2	19	3.9	0.1	*ND*	10	*ND*	*ND*	*ND*	36	42
	L-7 @ 3'	02/26/2016	3.0	*ND*	1.6	61	*ND*	*ND*	8.3	-	4.8	12	5.4	*ND*	*ND*	6.0	*ND*	*ND*	*ND*	22	29
L8	L-8 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-8 @ 2'	02/26/2016	2.0	*ND*	*ND*	33	*ND*	*ND*	4.1	-	1.9	3.8	1.3	0.19	*ND*	2.5	*ND*	*ND*	*ND*	11	13
	L-8 @ 3'	02/26/2016	3.0	*ND*	*ND*	37	*ND*	*ND*	4.7	-	2.4	3.8	1.2	*ND*	*ND*	2.9	*ND*	*ND*	*ND*	15	15
L-11	L-11 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-11 @ 2'	02/26/2016	2.0	*ND*	*ND*	42	*ND*	*ND*	5.2	-	3.0	4.7	1.4	*ND*	*ND*	4.0	*ND*	*ND*	*ND*	14	19
	L-11 @ 3'	02/26/2016	3.0	*ND*	1.0	48	*ND*	*ND*	5.3	-	3.0	5.6	3.3	*ND*	*ND*	4.1	*ND*	*ND*	*ND*	14	20
L-12	L-12 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-12 @ 2'	02/26/2016	2.0	*ND*	*ND*	45	*ND*	*ND*	4.6	-	2.6	4.5	4.9	*ND*	*ND*	3.3	*ND*	*ND*	*ND*	14	19
	L-12 @ 3'	02/26/2016	3.0	*ND*	*ND*	35	*ND*	*ND*	4.0	-	2.2	3.4	1.0	*ND*	*ND*	2.7	*ND*	*ND*	*ND*	12	14
			# of non-detects =>	**25**	**14**	**0**	**29**	**26**	**0**	**1**	**0**	**0**	**1**	**15**	**28**	**0**	**29**	**29**	**29**	**0**	**0**
			# of detects =>	**4**	**15**	**29**	**0**	**3**	**29**	**1**	**29**	**29**	**28**	**14**	**1**	**29**	**0**	**0**	**0**	**29**	**29**
			# of samples =>	**29**	**29**	**29**	**29**	**29**	**29**	**2**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**
			frequency of detection =>	**14%**	**52%**	**100%**	**0%**	**10%**	**100%**	**50%**	**100%**	**100%**	**97%**	**48%**	**3%**	**100%**	**0%**	**0%**	**0%**	**100%**	**100%**
			minimum detected =>	**3.3**	**1**	**33**	**-**	**1.9**	**4**	**2.9**	**1.9**	**3.4**	**1**	**0.1**	**1.2**	**2.5**	**-**	**-**	**-**	**11**	**13**
			maximum detected =>	**3.9**	**8.8**	**600**	**-**	**3.4**	**25**	**2.9**	**9**	**230**	**860**	**3.3**	**1.2**	**21**	**-**	**-**	**-**	**36**	**1500**

The Fehling Group, LLC

TABLE H-2

Soil Summary for PARC Area 1A - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)*	OCPs (µg/kg)**	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
1A-1	1A-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	1A-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	1A-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	1A-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
1A-2	1A-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	1A-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	1A-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	1A-2-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
1A-3	1A-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	1A-3-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	1A-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	1A-3-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
1A-4	1A-4-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	1A-4-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	1A-4-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	1A-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
L7	L-7 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
L8	L-8 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-8 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-8 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
L-11	L-11 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-11 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-11 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
L-12	L-12 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-12 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-

The Fehling Group, LLC

TABLE H-2

Soil Summary for PARC Area 1A - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)*	OCPs (µg/kg)**	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
L7	L-7 @ 1'	02/26/2016	1.0	ND	**63**	-	ND	ND	ND	ND	-	-
	L-7 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-7 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
L8	L-8 @ 1'	02/26/2016	1.0	ND	ND	-	ND	ND	ND	ND	-	-
	L-8 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-8 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
L-11	L-11 @ 1'	02/26/2016	1.0	ND	ND	-	ND	ND	ND	ND	-	-
	L-11 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-11 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
L-12	L-12 @ 1'	02/26/2016	1.0	ND	ND	-	ND	ND	ND	ND	-	-
	L-12 @ 2'	02/26/2016	2.0	ND	**110**	-	ND	ND	**17**	**2.9**	-	-
	L-12 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
		# of non-detects =>		**5**	**3**	**0**	**5**	**5**	**4**	**4**	**0**	**0**
		# of detects =>		**0**	**2**	**0**	**0**	**0**	**1**	**1**	**0**	**0**
		# of samples =>		**5**	**5**	**0**	**5**	**5**	**5**	**5**	**0**	**0**
		frequency of detection =>		**0%**	**40%**	**-**	**0%**	**0%**	**20%**	**20%**	**-**	**-**
		minimum detected =>		**-**	**63**	**-**	**-**	**-**	**17**	**2.9**	**-**	**-**
		maximum detected =>		**-**	**110**	**-**	**-**	**-**	**17**	**2.9**	**-**	**-**

* Detected PCB is Arochlor 1260.

** Detected OCP is 4,4'-DDT.

The Fehling Group, LLC

TABLE H-3
Soil EPCs (0 to 10 ft bgs)
~ PARC Area 1A ~

				Concentrations in Soil (wet weight basis)*								Concentrations in Soil (dry weight basis)**							
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-DRO (mg/kg)	Arochlor 1260 (µg/kg)	4,4'-DDT (µg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-DRO (mg/kg)	Arochlor 1260 (µg/kg)	4,4'-DDT (µg/kg)
1A-1	1A-1-0.5	05/15/2017	0.5	200	230	860	0.91	240	-	-	-	212	243	910	0.96	254	-	-	-
	1A-1-1.0	05/15/2017	1.0	99	46	230	*0.1*	130	-	-	-	105	49	243	*0.11*	137	-	-	-
	1A-1-3.0	05/15/2017	3.0	97	100	440	0.12	170	-	-	-	103	106	465	0.13	180	-	-	-
	1A-1-5.0	05/15/2017	5.0	33	4.5	1.1	*0.1*	15	-	-	-	35	4.8	1.2	*0.11*	16	-	-	-
1A-2	1A-2-0.5	05/15/2017	0.5	310	50	310	0.45	480	-	-	-	328	53	328	0.48	508	-	-	-
	1A-2-1.0	05/15/2017	1.0	63	9.2	15	0.2	45	-	-	-	67	10	16	0.21	48	-	-	-
	1A-2-3.0	05/15/2017	3.0	39	4.2	1.1	*0.1*	16	-	-	-	41	4.4	1.2	*0.11*	17	-	-	-
	1A-2-5.0	05/15/2017	5.0	120	18	3.2	0.17	45	-	-	-	127	19	3.4	0.18	48	-	-	-
1A-3	1A-3-0.5	05/15/2017	0.5	120	48	140	0.18	130	-	-	-	127	51	148	0.19	137	-	-	-
	1A-3-1.0	05/15/2017	1.0	130	26	130	0.2	150	-	-	-	137	27	137	0.21	159	-	-	-
	1A-3-3.0	05/15/2017	3.0	68	6.9	1.5	*0.1*	25	-	-	-	72	7.3	1.6	*0.11*	26	-	-	-
	1A-3-5.0	05/15/2017	5.0	35	3.9	*1*	*0.1*	17	-	-	-	37	4.1	*1.1*	*0.11*	18	-	-	-
1A-4	1A-4-0.5	05/15/2017	0.5	100	43	140	0.22	210	-	-	-	106	45	148	0.23	222	-	-	-
	1A-4-1.0	05/15/2017	1.0	83	16	4.2	*0.1*	39	-	-	-	88	17	4.4	*0.11*	41	-	-	-
	1A-4-3.0	05/15/2017	3.0	66	11	1.9	*0.1*	29	-	-	-	70	12	2.0	*0.11*	31	-	-	-
	1A-4-5.0	05/15/2017	5.0	55	7.7	1.7	*0.1*	26	-	-	-	58	8.1	1.8	*0.11*	27	-	-	-
L7	L-7 @ 1'	02/1/2016	1.0	150	100	290	0.2	200	-	-	-	159	106	307	0.21	212	-	-	-
	L-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L8	L-8 @ 1'	02/1/2016	1.0	91	15	32	*0.1*	59	-	-	-	96	16	34	*0.11*	62	-	-	-
	L-8 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-8 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-11	L-11 @ 1'	02/1/2016	1.0	600	170	690	3.3	1500	-	-	-	635	180	730	3.5	1586	-	-	-
	L-11 @ 3'	02/1/2016	3.0	73	9.8	2.5	0.1	30	-	-	-	77	10	2.6	0.11	32	-	-	-
	L-11 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-12	L-12 @ 1'	02/1/2016	1.0	85	15	76	0.13	76	-	-	-	90	16	80	0.14	80	-	-	-
	L-12 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The Fehling Group, LLC

TABLE H-3
Soil EPCs (0 to 10 ft bgs)
~ PARC Area 1A ~

				Concentrations in Soil (wet weight basis)*								Concentrations in Soil (dry weight basis)**							
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-DRO (mg/kg)	Arochlor 1260 (µg/kg)	4,4'-DDT (µg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-DRO (mg/kg)	Arochlor 1260 (µg/kg)	4,4'-DDT (µg/kg)
L7	L-7 @ 1'	02/26/2016	1.0	-	-	-	-	-	63	*1*	*1*	-	-	-	-	-	67	*1*	*1*
	L-7 @ 2'	02/26/2016	2.0	**100**	**19**	**3.9**	**0.1**	**42**	-	-	-	**106**	**20**	**4.1**	**0.11**	**44**	-	-	-
	L-7 @ 3'	02/26/2016	3.0	**61**	**12**	**5.4**	*0.1*	**29**	-	-	-	**65**	**13**	**5.7**	*0.11*	**31**	-	-	-
L8	L-8 @ 1'	02/26/2016	1.0	-	-	-	-	-	*10*	*1*	*1*	-	-	-	-	-	*11*	*1*	*1*
	L-8 @ 2'	02/26/2016	2.0	**33**	**3.8**	**1.3**	**0.19**	**13**	-	-	-	**35**	**4.0**	**1.4**	**0.20**	**14**	-	-	-
	L-8 @ 3'	02/26/2016	3.0	**37**	**3.8**	**1.2**	*0.1*	**15**	-	-	-	**39**	**4.0**	**1.3**	*0.11*	**16**	-	-	-
L-11	L-11 @ 1'	02/26/2016	1.0	-	-	-	-	-	*10*	*1*	*1*	-	-	-	-	-	*11*	*1*	*1*
	L-11 @ 2'	02/26/2016	2.0	**42**	**4.7**	**1.4**	*0.1*	**19**	-	-	-	**44**	**5.0**	**1.5**	*0.11*	**20**	-	-	-
	L-11 @ 3'	02/26/2016	3.0	**48**	**5.6**	**3.3**	*0.1*	**20**	-	-	-	**51**	**5.9**	**3.5**	*0.11*	**21**	-	-	-
L-12	L-12 @ 1'	02/26/2016	1.0	-	-	-	-	-	*10*	*1*	*1*	-	-	-	-	-	*11*	*1*	*1*
	L-12 @ 2'	02/26/2016	2.0	**45**	**4.5**	**4.9**	*0.1*	**19**	**110**	**17**	**2.9**	**48**	**4.8**	**5.2**	*0.11*	**20**	**116**	**18**	**3**
	L-12 @ 3'	02/26/2016	3.0	**35**	**3.4**	**1.0**	*0.1*	**14**	-	-	-	**37**	**3.6**	**1.1**	*0.11*	**15**	-	-	-
									95% UCL for 0 to 10 ft bgs (see Attachment O)* =>			**329**	**140**	**389**	**0.81**	**380**	**116**	**18**	**3**

* Italicized value is the reporting limit for 'non-detect' ('ND') result.

* 95% UCL not calculated due to low number of samples; value shown is maximum value

** Dry weight concentration = Wet weight concentration x (1 + average moisture content)
where average moisture content = 0.056 g/g (see **Table 1**).

The Fehling Group, LLC

TABLE H-4
Soil Risk Characterization Summary
~ PARC Area 1A ~

		Soil RBC (mg/kg)*				Risk Values (Incremental Lifetime Cancer Risk [ILCR] and Hazard Quotient [HQ])			
		Residential Receptor		Construction Worker Receptor		Residential Receptor		Construction Worker Receptor	
Soil COPC	**Soil EPC (mg/kg, dry weight basis)**	**Cancer Endpoint**	**Noncancer Endpoint**	**Cancer Endpoint**	**Noncancer Endpoint**	**ILCR (unitless)**	**HQ (unitless)**	**ILCR (unitless)**	**HQ (unitless)**
Barium	329	--	1.50E+04	--	3.02E+03	--	2.2E-02	--	1.1E-01
Copper	140	--	3.10E+03	--	1.42E+04	--	4.5E-02	--	9.9E-03
Lead	389	Not applicable (see Section 3.2.1.2)							
Mercury	0.81	--	1.01E+00	--	4.36E+01	--	8.0E-01	--	1.9E-02
Zinc	380	--	2.30E+04	--	1.06E+05	--	1.7E-02	--	3.6E-03
TPH-DRO	116	--	9.60E+01	--	8.85E+02	--	1.2E+00	--	1.3E-01
Arochlor 1260	0.018	2.40E-01	--	5.60E+00	--	7.5E-08	--	3.2E-09	--
4,4-DDT	0.003	1.90E+00	3.70E+01	5.73E+01	1.41E+02	1.6E-09	8.3E-05	5.4E-11	2.2E-05
		Cumulative Risk Values (ILCR and HI Values) =>				**7.7E-08**	**2.1E+00**	**3.3E-09**	**2.7E-01**

* "Combined" value listed in **Table 5** for the residential receptor and **Table 6** for the construction worker receptor.

The Fehling Group, LLC

ATTACHMENT I

Tables for PARC Area 2A, 2B, and 2C

TABLE I-1

Soil Summary for PARC Area 2A, 2B, and 2C - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
R-13-02	R02@5'	08/21/2013	5.0	ND	1.5	68	ND	1.2	11	5.3	13	ND	0.078	ND	7.5	ND	ND	ND	31	37
A-13-19	A19@5'	08/22/2013	5.0	ND	ND	14	ND	ND	ND	ND	51	ND	0.058	ND	ND	ND	ND	ND	ND	66
A-13-20	A20@5'	09/23/2013	5.0	ND	ND	82	ND	1.7	12	6.8	16	35	0.097	ND	9	ND	ND	ND	33	110
A-13-21	A21@5'	09/20/2013	5.0	ND	6	83	ND	2.7	16	6	250	170	0.12	ND	18	ND	ND	ND	25	160
2A-1	2A-1-0.5	05/15/2017	0.5	ND	ND	160	ND	ND	8.8	4.2	12	7.6	ND	ND	9.4	ND	ND	ND	19	46
	2A-1-1.0	05/15/2017	1.0	ND	ND	84	ND	ND	11	7.3	12	6.3	ND	ND	7.8	ND	ND	ND	27	36
	2A-1-3.0	05/15/2017	3.0	ND	ND	42	ND	ND	5.5	4.1	5.7	5.8	ND	ND	3.7	ND	ND	ND	15	23
	2A-1-5.0	05/15/2017	5.0	ND	1.0	90	ND	ND	7.7	2.8	5.5	10	ND	ND	4.8	ND	ND	ND	14	14
2A-2	2A-2-0.5	05/15/2017	0.5	ND	1.9	85	ND	ND	8.8	5.6	18	28	ND	ND	7.5	ND	ND	ND	22	48
	2A-2-1.0	05/15/2017	1.0	ND	1.4	59	ND	ND	8.1	5.3	8.4	6.5	ND	ND	5.6	ND	ND	ND	21	31
	2A-2-3.0	05/15/2017	3.0	ND	ND	49	ND	ND	6.6	4.5	6.7	2.6	ND	ND	4.6	ND	ND	ND	18	23
	2A-2-5.0	05/15/2017	5.0	ND	ND	58	ND	ND	8.6	5.5	6.9	1.2	ND	ND	5.1	ND	ND	ND	22	22
P33-B1	MC-1	08/15/2015	2.5	ND	ND	71	ND	ND	11	5	11	2.4	ND	ND	7.1	ND	ND	ND	21	33
	MC-2	08/15/2015	5.0	ND	2.1	140	1.3	ND	15	8.5	23	4.7	0.12	ND	11	ND	ND	ND	38	52
	MC-3	08/15/2015	7.5	ND	ND	136	ND	ND	3.3	2.9	3.8	ND	ND	ND	2.7	ND	ND	ND	11	15
P33-B2	MC-1	08/7/2015	2.5	ND	ND	33	ND	ND	4.4	2.4	4.5	1.1	ND	ND	3.2	ND	ND	ND	11	17
	MC-2	08/7/2015	5.0	ND	ND	130	1.4	ND	17	8.6	22	3.9	0.11	ND	12	ND	ND	ND	41	60
	MC-3	08/7/2015	7.5	ND	ND	23	ND	ND	3	2.1	5.3	1	0.9	ND	2.2	ND	ND	ND	10	16
	MC-4	08/7/2015	10.0	ND	ND	40	ND	ND	4.8	2.1	4	ND	ND	ND	2.3	ND	ND	ND	7.6	14
P33-B3	MC-1	08/7/2015	2.5	ND	ND	35	ND	ND	5.1	2.9	5.4	1.3	ND	ND	3.6	ND	ND	ND	14	19
	MC-2	08/7/2015	5.0	ND	1.7	120	1.6	ND	18	8.8	23	4.5	ND	ND	13	ND	ND	ND	41	60
	MC-3	08/7/2015	7.5	ND	ND	27	ND	ND	3.5	2	3.5	ND	ND	ND	2.4	ND	ND	ND	7.5	12
	MC-4	08/7/2015	10.0	ND	ND	54	ND	ND	8.5	4.3	7.8	1.4	ND	ND	5.3	ND	ND	ND	20	26
P33-B4	MC-1	08/7/2015	2.5	ND	1	89	ND	ND	11	5.7	13	3	ND	ND	8.1	ND	ND	ND	25	38
	MC-2	08/7/2015	5.0	ND	ND	58	ND	ND	8	4.1	8.2	1.6	ND	ND	5.5	ND	ND	ND	17	26
	MC-3	08/7/2015	7.5	ND	ND	21	ND	ND	3.1	2	2.6	ND	ND	ND	1.9	ND	ND	ND	5.7	9.3
	MC-4	08/7/2015	10.0	ND	ND	20	ND	ND	2.7	1.5	2.4	ND	3.4	ND	1.7	ND	ND	ND	6.5	11

The Fehling Group, LLC

TABLE I-1

Soil Summary for PARC Area 2A, 2B, and 2C - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
P32-B1	MC-1	08/12/2015	2.5	ND	ND	50	ND	ND	6.3	3.2	6	1.2	ND	ND	4.1	ND	ND	ND	16	21
	MC-2	08/12/2015	5.0	ND	ND	35	ND	ND	5.1	2.5	5.9	1.5	0.12	ND	3.4	ND	ND	ND	14	18
	MC-3	08/12/2015	7.5	ND	ND	23	ND	ND	3.6	2	4.9	1.2	ND	ND	2.4	ND	ND	ND	9.6	14
	MC-4	08/12/2015	10.0	ND	ND	38	ND	ND	5.6	3.7	5.6	1.1	ND	ND	3.8	ND	ND	ND	17	19
P32-B2	MC-1	08/12/2015	2.5	ND	ND	58	ND	ND	8.3	4.1	7.4	1.8	ND	ND	5.3	ND	ND	ND	19	26
	MC-2	08/12/2015	5.0	ND	1.1	52	ND	ND	8	3.9	10	2.5	ND	ND	5.6	ND	ND	ND	18	26
	MC-3	08/12/2015	7.5	ND	ND	32	ND	ND	4.2	2.3	4	1.2	ND	ND	2.7	ND	ND	ND	11	15
	MC-4	08/12/2015	10.0	ND	1.3	55	ND	ND	7.9	4.2	10	2.2	ND	ND	5.6	ND	ND	ND	17	23
RR-B1	MC-1	08/25/2015	2.5	ND	ND	44	ND	ND	6.1	3.4	7.6	2.4	ND	ND	4.4	ND	ND	ND	15	22
	MC-2	08/25/2015	5.0	ND	ND	53	ND	ND	7.7	4.2	10	3.6	ND	ND	5.3	ND	ND	ND	19	27
	MC-3	08/25/2015	7.5	ND	1.2	64	ND	ND	9.4	4.9	12	5.9	ND	ND	6.3	ND	ND	ND	22	33
	MC-4	08/25/2015	10.0	ND	1.1	52	ND	ND	7.9	4	8.9	5.5	ND	ND	5.4	ND	ND	ND	20	28
RR-B2	MC-1	08/25/2015	2.5	ND	ND	46	ND	ND	6	3.5	6.2	1.2	ND	ND	4.3	ND	ND	ND	17	22
	MC-2	08/25/2015	5.0	ND	ND	86	ND	ND	11	6.1	11	2.4	ND	ND	8.2	ND	ND	ND	26	42
	MC-3	08/25/2015	7.5	ND	ND	30	ND	ND	4.2	2.7	4.7	1.2	ND	ND	2.9	ND	ND	ND	10	15
	MC-4	08/25/2015	10.0	ND	ND	21	ND	ND	3.4	1.4	2.9	1	ND	ND	1.7	ND	ND	ND	6.2	12
RR-B3	MC-1	08/25/2015	2.5	ND	2.3	150	ND	ND	12	4.1	14	41	0.18	ND	8.9	ND	ND	ND	19	42
	MC-2	08/25/2015	5.0	ND	3.7	140	ND	ND	16	5.9	24	44	0.23	ND	15	ND	ND	ND	25	93
	MC-3	08/25/2015	7.5	ND	2.5	130	ND	ND	17	6.1	21	24	0.18	ND	13	ND	ND	ND	30	66
	MC-4	08/25/2015	10.0	ND	1.1	55	ND	ND	8.3	3.6	10	7.5	0.12	ND	5.1	ND	ND	ND	15	29
		# of non-detects =>		**47**	**31**	**0**	**44**	**44**	**1**	**1**	**0**	**7**	**34**	**47**	**1**	**47**	**47**	**47**	**1**	**0**
		# of detects =>		**0**	**16**	**47**	**3**	**3**	**46**	**46**	**47**	**40**	**13**	**0**	**46**	**0**	**0**	**0**	**46**	**47**
		# of samples =>		**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**47**
		frequency of detection =>		**0%**	**34%**	**100%**	**6%**	**6%**	**98%**	**98%**	**100%**	**85%**	**28%**	**0%**	**98%**	**0%**	**0%**	**0%**	**98%**	**100%**
		minimum detected =>		**-**	**1**	**14**	**1.3**	**1.2**	**2.7**	**1.4**	**2.4**	**1**	**0.058**	**-**	**1.7**	**-**	**-**	**-**	**5.7**	**9.3**
		maximum detected =>		**-**	**6**	**160**	**1.6**	**2.7**	**18**	**8.8**	**250**	**170**	**3.4**	**-**	**18**	**-**	**-**	**-**	**41**	**160**

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TABLE I-2

Soil Summary for PARC Area 2A, 2B, and 2C - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis) (0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
R-13-02	R02@5'	08/21/2013	5.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
A-13-19	A19@5'	08/22/2013	5.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
A-13-20	A20@5'	09/23/2013	5.0	**14**	**2**	*ND*	*ND*	-	-	-	-	-
A-13-21	A21@5'	09/20/2013	5.0	**370**	**50**	**11**	*ND*	-	-	-	-	-
2A-1	2A-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	2A-1-1.0	05/15/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	2A-1-3.0	05/15/2017	3.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
	2A-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
2A-2	2A-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	2A-2-1.0	05/15/2017	1.0	*ND*	**18**	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	2A-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	2A-2-5.0	05/15/2017	5.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
P33-B1	MC-1	08/15/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
	MC-2	08/15/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-3	08/15/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
P33-B2	MC-1	08/7/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-2	08/7/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-3	08/7/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/7/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
P33-B3	MC-1	08/7/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-2	08/7/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-3	08/7/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/7/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
P33-B4	MC-1	08/7/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
	MC-2	08/7/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-
	MC-3	08/7/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-
	MC-4	08/7/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
P32-B1	MC-1	08/12/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
	MC-2	08/12/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-3	08/12/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/12/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-

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TABLE I-2

Soil Summary for PARC Area 2A, 2B, and 2C - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis) (0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
P32-B2	MC-1	08/12/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-2	08/12/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-3	08/12/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/12/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
RR-B1	MC-1	08/25/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	-	-
	MC-2	08/25/2015	5.0	*ND*	**17**	**43**	*ND*	*ND*	-	-	-	-
	MC-3	08/25/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/25/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
RR-B2	MC-1	08/25/2015	2.5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	-	-
	MC-2	08/25/2015	5.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-3	08/25/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/25/2015	10.0	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
RR-B3	MC-1	08/25/2015	2.5	*ND*	**13**	**23**	*ND*	*ND*	*ND*	*ND*	-	-
	MC-2	08/25/2015	5.0	*ND*	**12**	**15**	*ND*	*ND*	*ND*	*ND*	-	-
	MC-3	08/25/2015	7.5	*ND*	*ND*	*ND*	*ND*	*ND*	-	-	-	-
	MC-4	08/25/2015	10.0	*ND*	**12**	**31**	*ND*	*ND*	-	-	-	-
			# of non-detects =>	**41**	**36**	**34**	**43**	**39**	**11**	**9**	**3**	**5**
			# of detects =>	**2**	**7**	**5**	**0**	**0**	**0**	**0**	**0**	**0**
			# of samples =>	**43**	**43**	**39**	**43**	**39**	**11**	**9**	**3**	**5**
			frequency of detection =>	**5%**	**16%**	**13%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
			minimum detected =>	**14**	**2.4**	**11**	**-**	**-**	**-**	**-**	**-**	**-**
			maximum detected =>	**370**	**50**	**43**	**-**	**-**	**-**	**-**	**-**	**-**

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TABLE I-3

Soil Gas and Ambient Air Summary for PARC Area 2A, 2B, and 2C

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cyclohexane	Dichlorodifluoromethane
2A-1-5	-	5/16/2017	5	89	ND	ND	ND	ND	ND	NA	21	ND	ND	ND	34	NA	6	27	ND	ND	ND	ND	NA	ND
2A-1-10	-	5/16/2017	10	54	ND	ND	ND	ND	ND	NA	33	ND	ND	ND	51	NA	ND	117	ND	ND	ND	ND	NA	ND
2A-1-15	-	5/16/2017	15	61	ND	ND	ND	ND	ND	NA	33	ND	ND	ND	68	NA	6	307	ND	ND	ND	ND	NA	ND
2A-2-5	-	5/16/2017	5	238	ND	ND	ND	ND	ND	NA	13	ND	ND	ND	31	NA	6	ND	ND	ND	ND	ND	NA	ND
2A-2-5 (DUP)	-	5/16/2017	5	227	ND	ND	ND	ND	ND	NA	57	ND	ND	ND	80	NA	ND	307	ND	ND	ND	ND	NA	ND
2A-2-10	-	5/16/2017	10	200	ND	ND	ND	ND	ND	NA	51	ND	ND	ND	51	NA	ND	237	ND	ND	ND	ND	NA	ND
2A-2-15	-	5/16/2017	15	105	ND	ND	ND	ND	ND	NA	10	ND	ND	ND	24	NA	ND	ND	ND	ND	ND	ND	NA	ND
2A-3-5	-	5/16/2017	5	21	ND	ND	ND	ND	ND	NA	9	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND
2A-3-10	-	5/16/2017	10	26	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND
2A-3-15	-	5/16/2017	15	24	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND
2A-AM	-	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	39	ND	ND	ND	56	NA	ND	51	ND	ND	ND	ND	NA	ND
P33-VP-1	VP-1	8/5/2015	5	30	ND	ND	6	1	7	ND	2	ND	ND	3	10	ND	0.86	ND	ND	ND	ND	ND	2	4
P33-VP-2	VP-2	8/5/2015	5	70	ND	ND	3	ND	6	ND	4	ND	ND	2	20	ND	0.89	ND	ND	ND	ND	ND	2	ND
P33-VP-3	VP-3	8/5/2015	5	90	2	ND	4	ND	7	ND	2	ND	ND	3	10	ND	0.89	ND	ND	ND	2	ND	1	3
P33-VP-3 (DUP)	VP-3 (DUP)	8/5/2015	5	160	3	ND	4	ND	8	ND	1	1	ND	2	10	ND	ND	ND	ND	ND	3	ND	1	3
P33-VP-4	VP-4	8/5/2015	5	ND	ND	ND	3	ND	5	ND	2	ND	ND	1	20	ND	0.83	ND	2	ND	ND	0.68	1	ND
P33-VP-5	VP-5	8/5/2015	5	80	2	ND	4	ND	7	1	3	ND	ND	3	10	ND	0.83	ND	ND	ND	ND	ND	1	1
P33-VP-6	VP-6	8/5/2015	5	3	ND	ND	3	ND	7	ND	2	ND	ND	1	10	ND	1	ND	ND	ND	ND	2	1	ND
P33-VP-7	VP-7	8/5/2015	5	40	ND	ND	4	1	9	1	2	ND	2	3	10	ND	0.89	ND	ND	ND	ND	ND	1	3
P32-VP-7 (DUP)	VP-7 (DUP)	8/7/2015	5	6	ND	ND	20	5	ND	2	3	ND	4	ND	20	ND	1	7	ND	ND	ND	0.62	ND	3
P33-VP-8	VP-8	8/5/2015	5	20	ND	ND	5	1	8	2	2	ND	1	4	10	ND	1	ND	ND	ND	2	ND	2	8
P33-VP-9	VP-9	8/5/2015	5	9	ND	ND	6	1	8	1	2	ND	1	3	10	ND	0.89	ND	ND	ND	ND	ND	1	2
P33-VP-9 (DUP)	VP-9 (DUP)	8/5/2015	5	9	ND	ND	5	1	8	2	2	ND	1	3	10	ND	2	ND	ND	ND	ND	ND	2	2
P33-VP-10	VP-10	8/5/2015	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
P33-VP-11	VP-11	8/5/2015	5	7	ND	NA	4	ND	7	2	1	ND	ND	4	8	ND	ND	ND	ND	ND	ND	ND	1	ND
P33-VP-12	VP-12	8/5/2015	5	3	ND	ND	3	ND	7	1	1	ND	ND	2	9	ND	ND	ND	ND	ND	ND	ND	1	ND
P32-VP-1	VP-1	8/7/2015	5	5	ND	ND	ND	ND	ND	ND	9	ND	ND	ND	40	0.86	2	1	ND	ND	ND	ND	ND	5
P32-VP-2	VP-2	8/7/2015	5	ND	ND	ND	2	ND	ND	ND	0.97	ND	ND	ND	10	ND	6	ND	ND	ND	ND	0.54	ND	ND
P32-VP-3	VP-3	8/7/2015	5	8	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	20	ND	ND	3	ND	ND	ND	ND	ND	2
P32-VP-4	VP-4	8/7/2015	5	5	ND	3	7	3	ND	ND	1	ND	2	ND	20	ND	ND	ND	ND	ND	ND	0.62	ND	1

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TABLE I-3

Soil Gas and Ambient Air Summary for PARC Area 2A, 2B, and 2C

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cyclohexane	Dichlorodifluoromethane
P32-VP-5	VP-5	8/7/2015	5	4	ND	ND	1	ND	ND	ND	5	ND	ND	ND	30	ND	1	1	ND	ND	ND	ND	ND	7
P32-VP-6	VP-6	8/7/2015	5	3	ND	ND	10	3	ND	4	1	ND	2	ND	10	ND	2	ND	ND	ND	ND	ND	ND	3
P32-VP-7	VP-7	8/7/2015	5	6	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	20	ND	0.93	7	ND	ND	ND	ND	0.93	3
P32-VP-8	VP-8	8/7/2015	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	2
P32-VP-9	VP-9	8/7/2015	5	3	ND	ND	20	7	ND	4	7	ND	4	ND	30	0.71	4	2	ND	ND	ND	0.7	1	3
P32-VP-10	VP-10	8/7/2015	5	ND	ND	ND	4	ND	ND	ND	4	ND	1	ND	20	ND	ND	ND	ND	ND	ND	0.74	ND	2
P32-VMW-1	VMW-1	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	9
P32-VMW-1 (DUP)	VMW-1 (DUP)	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	60	ND	ND	ND	ND	ND	110	ND	ND	9
P32-VMW-1 (10')	VMW-1-10	11/28/2016	10	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	8
P32-VWM-2	VMW-2	11/23/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
P32-VMW-2 (5')	VMW-2-5	11/28/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	4
P32-VWM-3	VWM-3	11/23/2016	15	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	270	10	70	10	ND	ND	ND	ND	4	ND
P32-VMW-3 (15')	VMW-3-15	11/28/2016	15	7	ND	ND	ND	ND	4	ND	7	ND	ND	ND	100	ND	30	20	ND	5	ND	3	ND	4
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	11/28/2016	15	6	ND	ND	ND	ND	7	ND	6	ND	ND	ND	100	5	20	20	ND	4	ND	3	ND	4
P32-VWM-4	VMW-4	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND	200	ND	ND	5	ND	ND	ND	ND	ND	ND
P32-VMW-4 (10')	VWM-4-10	11/28/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30	ND	ND	ND	ND	ND	ND	ND	ND	ND
		# of non-detects =>		12	43	44	26	37	31	25	10	45	37	33	3	31	23	30	45	44	42	37	19	22
		# of detects =>		34	3	1	20	9	15	10	36	1	9	13	43	4	23	16	1	2	4	9	16	24
		# of samples =>		46	46	45	46	46	46	35	46	46	46	46	46	35	46	46	46	46	46	46	35	46
		frequency of detection =>		74%	7%	2%	43%	20%	33%	29%	78%	2%	20%	28%	93%	11%	50%	35%	2%	4%	9%	20%	46%	52%
		minimum detected =>		3	2	3	1	1	4	1	0.97	1	1	1	2	0.71	0.83	1	2	4	2	0.54	0.93	1
		maximum detected =>		238	3	3	20	7	9	4	57	1	4	4	270	10	70	307	2	5	110	3	4	9

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TABLE I-3

Soil Gas and Ambient Air Summary for PARC Area 2A, 2B, and 2C

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
2A-1-5	-	5/16/2017	5	*NA*	*ND*	**10**	*ND*	*ND*	*NA*	*ND*	*NA*	**830**	**28**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-1-10	-	5/16/2017	10	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	**460**	**9**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-1-15	-	5/16/2017	15	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	**20**	*NA*	**360**	**12**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-5	-	5/16/2017	5	*NA*	**27**	**61**	*ND*	*ND*	*NA*	**39**	*NA*	**370**	**16**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-5 (DUP)	-	5/16/2017	5	*NA*	*ND*	**19**	*ND*	*ND*	*NA*	**9**	*NA*	**380**	**14**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-10	-	5/16/2017	10	*NA*	*ND*	**13**	**6**	*ND*	*NA*	**8**	*NA*	**280**	**9**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-15	-	5/16/2017	15	*NA*	*ND*	**10**	*ND*	*ND*	*NA*	*ND*	*NA*	**830**	**28**	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-3-5	-	5/16/2017	5	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	**8**	*NA*	**25**	*ND*	*ND*	**26**	*ND*	*ND*	*NA*	*NA*
2A-3-10	-	5/16/2017	10	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	**28**	*ND*	*ND*	**27**	*ND*	*ND*	*NA*	*NA*
2A-3-15	-	5/16/2017	15	*NA*	*ND*	**13**	*ND*	*ND*	*NA*	*ND*	*NA*	**29**	**10**	*ND*	**21**	*ND*	*ND*	*NA*	*NA*
2A-AM	-	5/16/2017	Ambient	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
P33-VP-1	VP-1	8/5/2015	5	**110**	**2**	**20**	*ND*	*ND*	*ND*	**3**	**1**	**20**	**30**	**40**	**5**	**1**	*ND*	**60**	**3700**
P33-VP-2	VP-2	8/5/2015	5	**90**	**1**	**10**	*ND*	*ND*	*ND*	**2**	*ND*	**30**	**10**	*NA*	**3**	**1**	*ND*	**40**	**1900**
P33-VP-3	VP-3	8/5/2015	5	**140**	**2**	**20**	*ND*	*ND*	*ND*	**3**	*ND*	**30**	**20**	*NA*	**1**	*ND*	*ND*	*NA*	**2100**
P33-VP-3 (DUP)	VP-3 (DUP)	8/5/2015	5	**90**	**2**	**10**	*ND*	*ND*	*ND*	**3**	*ND*	**40**	**10**	**420**	**2**	**0.95**	*ND*	**120**	**3000**
P33-VP-4	VP-4	8/5/2015	5	**60**	**4**	**30**	**0.94**	**2**	*ND*	**4**	*ND*	**4**	**80**	**2**	*ND*	*ND*	*ND*	**1100**	**2700**
P33-VP-5	VP-5	8/5/2015	5	**200**	**3**	**20**	*ND*	*ND*	*ND*	**4**	*ND*	**20**	**40**	**80**	**2**	**2**	*ND*	**160**	**3700**
P33-VP-6	VP-6	8/5/2015	5	**70**	**2**	**10**	**1**	*ND*	*ND*	**2**	*ND*	**6**	**30**	**10**	*ND*	*ND*	*ND*	**370**	**1700**
P33-VP-7	VP-7	8/5/2015	5	**200**	**3**	**20**	*ND*	*ND*	*ND*	**4**	*ND*	**40**	**20**	*ND*	**2**	*ND*	*ND*	**50**	**1900**
P32-VP-7 (DUP)	VP-7 (DUP)	8/7/2015	5	**60**	**3**	**30**	*ND*	**40**	**2**	**6**	**10**	**9**	**4**	*ND*	**20**	**2**	**1**	**180**	**2100**
P33-VP-8	VP-8	8/5/2015	5	**330**	**3**	**20**	*ND*	*ND*	*ND*	**4**	*ND*	**20**	**10**	*ND*	**2**	**3**	*ND*	**100**	**2200**
P33-VP-9	VP-9	8/5/2015	5	**250**	**3**	**20**	*ND*	*ND*	*ND*	**5**	*ND*	**40**	**40**	**2**	**1**	**2**	*ND*	**80**	**2000**
P33-VP-9 (DUP)	VP-9 (DUP)	8/5/2015	5	**230**	**3**	**20**	*ND*	*ND*	*ND*	**4**	*ND*	**20**	**20**	**2**	*ND*	**2**	*ND*	**110**	**2600**
P33-VP-10	VP-10	8/5/2015	5	**280**	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	**2**	**2**	*ND*	*ND*	*ND*	*ND*	*NA*	**2600**
P33-VP-11	VP-11	8/5/2015	5	**200**	**2**	**20**	*ND*	*ND*	*ND*	**3**	*ND*	**20**	**10**	*ND*	*ND*	**0.88**	*ND*	**40**	**4300**
P33-VP-12	VP-12	8/5/2015	5	**200**	**2**	**10**	*ND*	*ND*	*ND*	**3**	*ND*	**70**	**10**	*ND*	**2**	*ND*	*ND*	**40**	**2900**
P32-VP-1	VP-1	8/7/2015	5	**60**	**1**	**10**	*ND*	*ND*	*ND*	**2**	*ND*	**20**	**2**	*ND*	**10**	**1**	**3**	**210**	**2000**
P32-VP-2	VP-2	8/7/2015	5	**4**	**1**	**10**	*ND*	**6**	*ND*	**2**	*ND*	*ND*	**10**	*ND*	*ND*	*ND*	*ND*	**2200**	**3100**
P32-VP-3	VP-3	8/7/2015	5	**9**	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	**10**	**0.94**	*ND*	**4**	*ND*	*ND*	**1100**	**4200**
P32-VP-4	VP-4	8/7/2015	5	**20**	**10**	**120**	*ND*	**2**	*ND*	**20**	*ND*	**6**	**280**	*ND*	**1**	*ND*	*ND*	**990**	**12000**

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TABLE I-3

Soil Gas and Ambient Air Summary for PARC Area 2A, 2B, and 2C

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
P32-VP-5	VP-5	8/7/2015	5	40	2	10	*ND*	*ND*	*ND*	2	*ND*	10	4	*ND*	30	*ND*	1	2300	7100
P32-VP-6	VP-6	8/7/2015	5	7	2	20	*ND*	3	*ND*	4	3	7	8	*ND*	30	*ND*	*ND*	70	2400
P32-VP-7	VP-7	8/7/2015	5	20	*ND*	7	*ND*	*ND*	*ND*	1	*ND*	9	2	*ND*	20	*ND*	*ND*	70	2700
P32-VP-8	VP-8	8/7/2015	5	4	*ND*	*ND*	*ND*	1	*ND*	*ND*	*ND*	8	*ND*	*ND*	3	*ND*	*ND*	30	2200
P32-VP-9	VP-9	8/7/2015	5	20	5	70	*ND*	4	*ND*	20	2	5	30	*ND*	9	1	0.87	480	2400
P32-VP-10	VP-10	8/7/2015	5	50	20	150	*ND*	2	*ND*	30	*ND*	2	210	*ND*	2	*ND*	0.69	450	4200
P32-VMW-1	VMW-1	11/23/2016	10	3	*ND*	20	*ND*	*ND*	*ND*	*ND*	*ND*	10	50	*ND*	20	*ND*	*ND*	10	300
P32-VMW-1 (DUP)	VMW-1 (DUP)	11/23/2016	10	4	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	490	40	*ND*	20	*ND*	*ND*	10	780
P32-VMW-1 (10')	VMW-1-10	11/28/2016	10	2	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	10	60	*ND*	20	*ND*	*ND*	6000	*ND*
P32-VWM-2	VMW-2	11/23/2016	5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	40	*ND*	10	*ND*	*ND*	6	390
P32-VMW-2 (5')	VMW-2-5	11/28/2016	5	2	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	9	60	*ND*	20	*ND*	*ND*	3200	*ND*
P32-VWM-3	VWM-3	11/23/2016	15	20	8	40	*ND*	*ND*	*ND*	5	*ND*	50	90	10	*ND*	*ND*	*ND*	20	1500
P32-VMW-3 (15')	VMW-3-15	11/28/2016	15	10	3	10	*ND*	*ND*	*ND*	*ND*	*ND*	9	70	*ND*	10	*ND*	*ND*	2000	450
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	11/28/2016	15	20	3	20	*ND*	*ND*	*ND*	*ND*	*ND*	7	190	*ND*	10	*ND*	*ND*	12000	850
P32-VWM-4	VMW-4	11/23/2016	10	10	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	30	*ND*	10	*ND*	*ND*	7	370
P32-VMW-4 (10')	VWM-4-10	11/28/2016	10	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	90	*ND*	10	*ND*	*ND*	4800	360
		# of non-detects =>		2	21	14	43	38	34	18	31	5	4	36	15	35	41	0	2
		# of detects =>		33	25	32	3	8	1	28	4	41	42	8	31	11	5	33	33
		# of samples =>		35	46	46	46	46	35	46	35	46	46	44	46	46	46	33	35
		frequency of detection =>		94%	54%	70%	7%	17%	3%	61%	11%	89%	91%	18%	67%	24%	11%	100%	94%
		minimum detected =>		2	1	7	0.94	1	2	1	1	2	0.94	2	1	0.88	0.69	6	300
		maximum detected =>		330	27	150	6	40	2	39	10	830	280	420	30	3	3	12000	12000

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TABLE I-4

Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*							Concentrations in Soil (dry weight basis, mg/kg)**						
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium	Copper	Lead	Mercury	TPH-GRO	TPH-DRO	TPH-ORO	Barium	Copper	Lead	Mercury	TPH-GRO	TPH-DRO	TPH-ORO
R-13-02	R02@5'	08/21/2013	5.0	68	13	*1*	0.078	*1*	*10*	*10*	72	14	*1.06*	0.082	*1.1*	*10.6*	*10.6*
A-13-19	A19@5'	08/22/2013	5.0	14	51	*1*	0.058	*1*	*10*	*10*	15	54	*1.06*	0.061	*1.1*	*10.6*	*10.6*
A-13-20	A20@5'	09/23/2013	5.0	82	16	35	0.097	14	2	*10*	87	17	37	0.103	15	3	*10.6*
A-13-21	A21@5'	09/20/2013	5.0	83	250	170	0.12	370	50	11	88	264	180	0.13	391	53	12
2A-1	2A-1-0.5	05/15/2017	0.5	160	12	7.6	*0.1*	-	-	-	169	13	8.0	*0.11*	-	-	-
	2A-1-1.0	05/15/2017	1.0	84	12	6.3	*0.1*	*1*	*10*	-	89	13	6.7	*0.11*	*1.1*	*10.6*	-
	2A-1-3.0	05/15/2017	3.0	42	5.7	5.8	*0.1*	*1*	*10*	-	44	6.0	6.1	*0.11*	*1.1*	*10.6*	-
	2A-1-5.0	05/15/2017	5.0	90	5.5	10	*0.1*	-	-	-	95	5.8	11	*0.11*	-	-	-
2A-2	2A-2-0.5	05/15/2017	0.5	85	18	28	*0.1*	-	-	-	90	19	30	*0.11*	-	-	-
	2A-2-1.0	05/15/2017	1.0	59	8.4	6.5	*0.1*	*1*	18	-	62	8.9	6.9	*0.11*	*1.1*	19	-
	2A-2-3.0	05/15/2017	3.0	49	6.7	2.6	*0.1*	-	-	-	52	7.1	2.7	*0.11*	-	-	-
	2A-2-5.0	05/15/2017	5.0	58	6.9	1.2	*0.1*	*1*	*10*	-	61	7.3	1.3	*0.11*	*1.1*	*10.6*	-
P33-B1	MC-1	08/15/2015	2.5	71	11	2.4	*0.1*	*1*	*10*	*10*	75	12	2.5	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/15/2015	5.0	140	23	4.7	0.12	*1*	*10*	*10*	148	24	5.0	0.13	*1.1*	*10.6*	*10.6*
	MC-3	08/15/2015	7.5	136	3.8	*1*	*0.1*	*1*	*10*	*10*	144	4.0	*1.06*	*0.11*	*1.1*	*10.6*	*10.6*
P33-B2	MC-1	08/7/2015	2.5	33	4.5	1.1	*0.1*	*1*	*10*	*10*	35	4.8	1.2	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/7/2015	5.0	130	22	3.9	0.11	*1*	*10*	*10*	137	23	4.1	0.12	*1.1*	*10.6*	*10.6*
	MC-3	08/7/2015	7.5	23	5.3	1	0.9	*1*	*10*	*10*	24	5.6	1	1.0	*1.1*	*10.6*	*10.6*
	MC-4	08/7/2015	10.0	40	4	*1*	*0.1*	*1*	*10*	*10*	42	4	*1.06*	*0.11*	*1.1*	*10.6*	*10.6*
P33-B3	MC-1	08/7/2015	2.5	35	5.4	1.3	*0.1*	*1*	*10*	*10*	37	5.7	1.4	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/7/2015	5.0	120	23	4.5	*0.1*	*1*	*10*	*10*	127	24	4.8	*0.11*	*1.1*	*10.6*	*10.6*
	MC-3	08/7/2015	7.5	27	3.5	*1*	*0.1*	*1*	*10*	*10*	29	3.7	*1.06*	*0.11*	*1.1*	*10.6*	*10.6*
	MC-4	08/7/2015	10.0	54	7.8	1.4	*0.1*	*1*	*10*	*10*	57	8.2	1.5	*0.11*	*1.1*	*10.6*	*10.6*
P33-B4	MC-1	08/7/2015	2.5	89	13	3	*0.1*	*1*	*10*	*10*	94	14	3	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/7/2015	5.0	58	8.2	1.6	*0.1*	*1*	*10*	*10*	61	8.7	1.7	*0.11*	*1.1*	*10.6*	*10.6*
	MC-3	08/7/2015	7.5	21	2.6	*1*	*0.1*	*1*	*10*	*10*	22	2.7	*1.06*	*0.11*	*1.1*	*10.6*	*10.6*
	MC-4	08/7/2015	10.0	20	2.4	*1*	3.4	*1*	*10*	*10*	21	2.5	*1.06*	3.6	*1.1*	*10.6*	*10.6*

The Fehling Group, LLC

TABLE I-4

Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*							Concentrations in Soil (dry weight basis, mg/kg)**						
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium	Copper	Lead	Mercury	TPH-GRO	TPH-DRO	TPH-ORO	Barium	Copper	Lead	Mercury	TPH-GRO	TPH-DRO	TPH-ORO
P32-B1	MC-1	08/12/2015	2.5	50	6	1.2	*0.1*	*1*	*10*	*10*	53	6	1.3	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/12/2015	5.0	35	5.9	1.5	0.12	*1*	*10*	*10*	37	6.2	1.6	0.13	*1.1*	*10.6*	*10.6*
	MC-3	08/12/2015	7.5	23	4.9	1.2	*0.1*	*1*	*10*	*10*	24	5.2	1.3	*0.11*	*1.1*	*10.6*	*10.6*
	MC-4	08/12/2015	10.0	38	5.6	1.1	*0.1*	*1*	*10*	*10*	40	5.9	1.2	*0.11*	*1.1*	*10.6*	*10.6*
P32-B2	MC-1	08/12/2015	2.5	58	7.4	1.8	*0.1*	*1*	*10*	*10*	61	7.8	1.9	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/12/2015	5.0	52	10	2.5	*0.1*	*1*	*10*	*10*	55	11	2.6	*0.11*	*1.1*	*10.6*	*10.6*
	MC-3	08/12/2015	7.5	32	4	1.2	*0.1*	*1*	*10*	*10*	34	4	1.3	*0.11*	*1.1*	*10.6*	*10.6*
	MC-4	08/12/2015	10.0	55	10	2.2	*0.1*	*1*	*10*	*10*	58	11	2.3	*0.11*	*1.1*	*10.6*	*10.6*
RR-B1	MC-1	08/25/2015	2.5	44	7.6	2.4	*0.1*	*1*	*10*	*10*	47	8.0	2.5	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/25/2015	5.0	53	10	3.6	*0.1*	*1*	17	43	56	11	3.8	*0.11*	*1.1*	18	45
	MC-3	08/25/2015	7.5	64	12	5.9	*0.1*	*1*	*10*	*10*	68	13	6.2	*0.11*	*1.1*	*10.6*	*10.6*
	MC-4	08/25/2015	10.0	52	8.9	5.5	*0.1*	*1*	*10*	*10*	55	9.4	5.8	*0.11*	*1.1*	*10.6*	*10.6*
RR-B2	MC-1	08/25/2015	2.5	46	6.2	1.2	*0.1*	*1*	*10*	*10*	49	6.6	1.3	*0.11*	*1.1*	*10.6*	*10.6*
	MC-2	08/25/2015	5.0	86	11	2.4	*0.1*	*1*	*10*	*10*	91	12	2.5	*0.11*	*1.1*	*10.6*	*10.6*
	MC-3	08/25/2015	7.5	30	4.7	1.2	*0.1*	*1*	*10*	*10*	32	5.0	1.3	*0.11*	*1.1*	*10.6*	*10.6*
	MC-4	08/25/2015	10.0	21	2.9	1	*0.1*	*1*	*10*	*10*	22	3.1	1	*0.11*	*1.1*	*10.6*	*10.6*
RR-B3	MC-1	08/25/2015	2.5	150	14	41	0.18	*1*	13	23	159	15	43	0.19	*1.1*	14	24
	MC-2	08/25/2015	5.0	140	24	44	0.23	*1*	12	15	148	25	47	0.24	*1.1*	13	16
	MC-3	08/25/2015	7.5	130	21	24	0.18	*1*	*10*	*10*	137	22	25	0.19	*1.1*	*10.6*	*10.6*
	MC-4	08/25/2015	10.0	55	10	7.5	0.12	*1*	12	31	58	11	7.9	0.13	*1.1*	13	33
			95% UCL for 0 to 10 ft bgs (see Attachment O) =>								**81**	**17**	**28**	**0.54**	**50**	**14**	**15**

* Italicized value is the reporting limit for 'non-detect' ('ND') result.

** Dry weight concentration = Wet weight concentration x (1 + average moisture content)
where average moisture content = 0.056 g/g (see **Table 1**).

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TABLE I-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
2A-1-5	-	5/16/2017	5	5E-02	ND	ND	ND	ND	ND	NA	2E-02	ND	ND	ND	3E-02	NA	5E-03	2E-02	ND	ND	ND	ND
2A-1-10	-	5/16/2017	10	2E-02	ND	ND	ND	ND	ND	NA	2E-02	ND	ND	ND	3E-02	NA	ND	6E-02	ND	ND	ND	ND
2A-1-15	-	5/16/2017	15	2E-02	ND	ND	ND	ND	ND	NA	1E-02	ND	ND	ND	3E-02	NA	2E-03	1E-01	ND	ND	ND	ND
2A-2-5	-	5/16/2017	5	1E-01	ND	ND	ND	ND	ND	NA	1E-02	ND	ND	ND	3E-02	NA	4E-03	ND	ND	ND	ND	ND
2A-2-5 (DUP)	-	5/16/2017	5	1E-01	ND	ND	ND	ND	ND	NA	4E-02	ND	ND	ND	6E-02	NA	ND	2E-01	ND	ND	ND	ND
2A-2-10	-	5/16/2017	10	7E-02	ND	ND	ND	ND	ND	NA	3E-02	ND	ND	ND	3E-02	NA	ND	1E-01	ND	ND	ND	ND
2A-2-15	-	5/16/2017	15	3E-02	ND	ND	ND	ND	ND	NA	4E-03	ND	ND	ND	1E-02	NA	ND	ND	ND	ND	ND	ND
2A-3-5	-	5/16/2017	5	1E-02	ND	ND	ND	ND	ND	NA	7E-03	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-10	-	5/16/2017	10	9E-03	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-15	-	5/16/2017	15	7E-03	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-AM	-	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	4E+01	ND	ND	ND	6E+01	NA	ND	5E+01	ND	ND	ND	ND
P33-VP-1	VP-1	8/5/2015	5	2E-02	ND	ND	3E-03	5E-04	3E-03	ND	1E-03	ND	ND	2E-03	8E-03	ND	6E-04	ND	ND	ND	ND	ND
P33-VP-2	VP-2	8/5/2015	5	4E-02	ND	ND	2E-03	ND	3E-03	ND	3E-03	ND	ND	1E-03	2E-02	ND	6E-04	ND	ND	ND	ND	ND
P33-VP-3	VP-3	8/5/2015	5	5E-02	1E-03	ND	2E-03	ND	3E-03	ND	1E-03	ND	ND	2E-03	8E-03	ND	6E-04	ND	ND	ND	1E-03	ND
P32-VP-3 (DUP)	VP-3 (DUP)	8/5/2015	5	9E-02	2E-03	ND	2E-03	ND	4E-03	ND	7E-04	6E-04	ND	1E-03	8E-03	ND	ND	ND	ND	ND	2E-03	ND
P33-VP-4	VP-4	8/5/2015	5	ND	ND	ND	2E-03	ND	2E-03	ND	1E-03	ND	ND	6E-04	2E-02	ND	6E-04	ND	1E-03	ND	ND	6E-04
P33-VP-5	VP-5	8/5/2015	5	4E-02	1E-03	ND	2E-03	ND	3E-03	-	2E-03	ND	ND	2E-03	8E-03	ND	6E-04	ND	ND	ND	ND	ND
P33-VP-6	VP-6	8/5/2015	5	2E-03	ND	ND	2E-03	ND	3E-03	ND	1E-03	ND	ND	6E-04	8E-03	ND	7E-04	ND	ND	ND	ND	2E-03
P33-VP-7	VP-7	8/5/2015	5	2E-02	ND	ND	2E-03	5E-04	4E-03	-	1E-03	ND	1E-03	2E-03	8E-03	ND	6E-04	ND	ND	ND	ND	ND
P32-VP-7 (DUP)	VP-7 (DUP)	8/7/2015	5	3E-03	ND	ND	1E-02	3E-03	ND	-	2E-03	ND	2E-03	ND	2E-02	ND	7E-04	6E-03	ND	ND	ND	5E-04
P33-VP-8	VP-8	8/5/2015	5	1E-02	ND	ND	3E-03	5E-04	4E-03	-	1E-03	ND	6E-04	2E-03	8E-03	ND	7E-04	ND	ND	ND	1E-03	ND
P33-VP-9	VP-9	8/5/2015	5	5E-03	ND	ND	3E-03	5E-04	4E-03	-	1E-03	ND	6E-04	2E-03	8E-03	ND	6E-04	ND	ND	ND	ND	ND
P33-VP-9 (DUP)	VP-9 (DUP)	8/5/2015	5	5E-03	ND	ND	3E-03	5E-04	4E-03	-	1E-03	ND	6E-04	2E-03	8E-03	ND	1E-03	ND	ND	ND	ND	ND
P33-VP-10	VP-10	8/5/2015	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-03	ND	ND	ND	ND	ND	ND	ND
P33-VP-11	VP-11	8/5/2015	5	4E-03	ND	NA	2E-03	ND	3E-03	-	7E-04	ND	ND	2E-03	6E-03	ND	ND	ND	ND	ND	ND	ND
P33-VP-12	VP-12	8/5/2015	5	2E-03	ND	ND	2E-03	ND	3E-03	-	7E-04	ND	ND	1E-03	7E-03	ND	ND	ND	ND	ND	ND	ND

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TABLE I-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P32-VP-1	VP-1	8/7/2015	5	3E-03	ND	ND	ND	ND	ND	ND	7E-03	ND	ND	ND	3E-02	8E-04	1E-03	8E-04	ND	ND	ND	ND
P32-VP-2	VP-2	8/7/2015	5	ND	ND	ND	1E-03	ND	ND	ND	7E-04	ND	ND	ND	8E-03	ND	4E-03	ND	ND	ND	ND	5E-04
P32-VP-3	VP-3	8/7/2015	5	4E-03	ND	ND	ND	ND	ND	ND	2E-03	ND	ND	ND	2E-02	ND	ND	2E-03	ND	ND	ND	ND
P32-VP-4	VP-4	8/7/2015	5	3E-03	ND	1E-03	4E-03	2E-03	ND	ND	7E-04	ND	1E-03	ND	2E-02	ND	ND	ND	ND	ND	ND	5E-04
P32-VP-5	VP-5	8/7/2015	5	2E-03	ND	ND	5E-04	ND	ND	ND	4E-03	ND	ND	ND	2E-02	ND	7E-04	8E-04	ND	ND	ND	ND
P32-VP-6	VP-6	8/7/2015	5	2E-03	ND	ND	5E-03	2E-03	ND	-	7E-04	ND	1E-03	ND	8E-03	ND	1E-03	ND	ND	ND	ND	ND
P32-VP-7	VP-7	8/7/2015	5	3E-03	ND	ND	ND	ND	ND	ND	2E-03	ND	ND	ND	2E-02	ND	7E-04	6E-03	ND	ND	ND	ND
P32-VP-8	VP-8	8/7/2015	5	4E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4E-03	ND	ND	ND	ND	ND	ND	ND
P32-VP-9	VP-9	8/7/2015	5	2E-03	ND	ND	1E-02	4E-03	ND	-	5E-03	ND	2E-03	ND	2E-02	7E-04	3E-03	2E-03	ND	ND	ND	6E-04
P32-VP-10	VP-10	8/7/2015	5	ND	ND	ND	2E-03	ND	ND	ND	3E-03	ND	6E-04	ND	2E-02	ND	ND	ND	ND	ND	ND	6E-04
P32-VMW-1	VMW-1	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4E-02	ND	ND	ND	ND	ND	ND	ND
P32-VMW-1 (DUP)	VMW-1 (DUP)	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3E-02	ND	ND	ND	ND	ND	5E-02	ND
P32-VMW-1 (10')	VMW-1-10	11/28/2016	10	2E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6E-03	ND	ND	ND	ND	ND	ND	ND
P32-VWM-2	VMW-2	11/23/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4E-02	ND	ND	ND	ND	ND	ND	ND
P32-VMW-2 (5')	VMW-2-5	11/28/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8E-03	ND	ND	ND	ND	ND	ND	ND
P32-VWM-3	VWM-3	11/23/2016	15	ND	ND	ND	ND	ND	ND	ND	4E-03	ND	ND	ND	1E-01	5E-03	3E-02	4E-03	ND	ND	ND	ND
P32-VMW-3 (15')	VMW-3-15	11/28/2016	15	2E-03	ND	ND	ND	ND	1E-03	ND	3E-03	ND	ND	ND	4E-02	ND	1E-02	8E-03	ND	2E-03	ND	1E-03
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	11/28/2016	15	2E-03	ND	ND	ND	ND	2E-03	ND	2E-03	ND	ND	ND	4E-02	3E-03	7E-03	8E-03	ND	2E-03	ND	1E-03
P32-VWM-4	VMW-4	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	2E-03	ND	ND	ND	1E-01	ND	ND	3E-03	ND	ND	ND	ND
P32-VMW-4 (10')	VWM-4-10	11/28/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-02	ND	ND	ND	ND	ND	ND	ND

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TABLE I-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
2A-1-5	-	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	6E-03	*ND*	*ND*	*NA*	*ND*	*NA*	4E-01	2E-02	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-1-10	-	5/16/2017	10	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	1E-01	4E-03	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-1-15	-	5/16/2017	15	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	6E-03	*NA*	8E-02	4E-03	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-5	-	5/16/2017	5	*NA*	*ND*	*NA*	2E-02	4E-02	*ND*	*ND*	*NA*	2E-02	*NA*	2E-01	1E-02	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-5 (DUP)	-	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	1E-02	*ND*	*ND*	*NA*	5E-03	*NA*	2E-01	9E-03	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-10	-	5/16/2017	10	*NA*	*ND*	*NA*	*ND*	5E-03	3E-03	*ND*	*NA*	3E-03	*NA*	8E-02	4E-03	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-15	-	5/16/2017	15	*NA*	*ND*	*NA*	*ND*	3E-03	*ND*	*ND*	*NA*	*ND*	*NA*	2E-01	9E-03	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-3-5	-	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	5E-03	*NA*	1E-02	*ND*	*ND*	1E-02	*ND*	*ND*	*NA*	*NA*
2A-3-10	-	5/16/2017	10	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	8E-03	*ND*	*ND*	1E-02	*ND*	*ND*	*NA*	*NA*
2A-3-15	-	5/16/2017	15	*NA*	*ND*	*NA*	*ND*	4E-03	*ND*	*ND*	*NA*	*ND*	*NA*	6E-03	3E-03	*ND*	6E-03	*ND*	*ND*	*NA*	*NA*
2A-AM	-	5/16/2017	Ambient	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
P33-VP-1	VP-1	8/5/2015	5	1E-03	2E-03	1E-01	1E-03	1E-02	*ND*	*ND*	*ND*	2E-03	5E-04	9E-03	2E-02	2E-02	3E-03	7E-04	*ND*	5E-02	3E+00
P33-VP-2	VP-2	8/5/2015	5	1E-03	*ND*	1E-01	6E-04	6E-03	*ND*	*ND*	*ND*	1E-03	*ND*	1E-02	6E-03	*NA*	2E-03	7E-04	*ND*	3E-02	1E+00
P33-VP-3	VP-3	8/5/2015	5	6E-04	2E-03	2E-01	1E-03	1E-02	*ND*	*ND*	*ND*	2E-03	*ND*	1E-02	1E-02	NA	6E-04	*ND*	*ND*	*NA*	1E+00
P32-VP-3 (DUP)	VP-3 (DUP)	8/5/2015	5	6E-04	2E-03	1E-01	1E-03	6E-03	*ND*	*ND*	*ND*	2E-03	*ND*	2E-02	6E-03	2E-01	1E-03	6E-04	*ND*	1E-01	2E+00
P33-VP-4	VP-4	8/5/2015	5	6E-04	*ND*	7E-02	2E-03	2E-02	7E-04	1E-03	*ND*	2E-03	*ND*	2E-03	5E-02	1E-03	*ND*	*ND*	*ND*	9E-01	2E+00
P33-VP-5	VP-5	8/5/2015	5	6E-04	6E-04	2E-01	2E-03	1E-02	*ND*	*ND*	*ND*	2E-03	*ND*	9E-03	3E-02	5E-02	1E-03	1E-03	*ND*	1E-01	3E+00
P33-VP-6	VP-6	8/5/2015	5	6E-04	*ND*	8E-02	1E-03	6E-03	8E-04	*ND*	*ND*	1E-03	*ND*	3E-03	2E-02	6E-03	*ND*	*ND*	*ND*	3E-01	1E+00
P33-VP-7	VP-7	8/5/2015	5	6E-04	2E-03	2E-01	2E-03	1E-02	*ND*	*ND*	*ND*	2E-03	*ND*	2E-02	1E-02	*ND*	1E-03	*ND*	*ND*	4E-02	1E+00
P32-VP-7 (DUP)	VP-7 (DUP)	8/7/2015	5	*ND*	2E-03	7E-02	2E-03	2E-02	*ND*	2E-02	1E-03	3E-03	5E-03	4E-03	3E-03	*ND*	1E-02	1E-03	8E-04	2E-01	1E+00
P33-VP-8	VP-8	8/5/2015	5	1E-03	5E-03	4E-01	2E-03	1E-02	*ND*	*ND*	*ND*	2E-03	*ND*	9E-03	6E-03	*ND*	1E-03	2E-03	*ND*	9E-02	2E+00
P33-VP-9	VP-9	8/5/2015	5	6E-04	1E-03	3E-01	2E-03	1E-02	*ND*	*ND*	*ND*	3E-03	*ND*	2E-02	3E-02	1E-03	6E-04	1E-03	*ND*	7E-02	1E+00
P33-VP-9 (DUP)	VP-9 (DUP)	8/5/2015	5	1E-03	1E-03	3E-01	2E-03	1E-02	*ND*	*ND*	*ND*	2E-03	*ND*	9E-03	1E-02	1E-03	*ND*	1E-03	*ND*	9E-02	2E+00
P33-VP-10	VP-10	8/5/2015	5	*ND*	*ND*	3E-01	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	9E-04	1E-03	*ND*	*ND*	*ND*	*ND*	*NA*	2E+00
P33-VP-11	VP-11	8/5/2015	5	6E-04	*ND*	2E-01	1E-03	1E-02	*ND*	*ND*	*ND*	2E-03	*ND*	9E-03	6E-03	*ND*	*ND*	6E-04	*ND*	3E-02	3E+00
P33-VP-12	VP-12	8/5/2015	5	6E-04	*ND*	2E-01	1E-03	6E-03	*ND*	*ND*	*ND*	2E-03	*ND*	3E-02	6E-03	*ND*	1E-03	*ND*	*ND*	3E-02	2E+00

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TABLE I-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
P32-VP-1	VP-1	8/7/2015	5	ND	3E-03	7E-02	6E-04	6E-03	ND	ND	ND	1E-03	ND	9E-03	1E-03	ND	6E-03	7E-04	2E-03	2E-01	1E+00
P32-VP-2	VP-2	8/7/2015	5	ND	ND	5E-03	6E-04	6E-03	ND	3E-03	ND	1E-03	ND	ND	6E-03	ND	ND	ND	ND	2E+00	2E+00
P32-VP-3	VP-3	8/7/2015	5	ND	1E-03	1E-02	ND	ND	ND	ND	ND	ND	ND	5E-03	6E-04	ND	2E-03	ND	ND	9E-01	3E+00
P32-VP-4	VP-4	8/7/2015	5	ND	6E-04	2E-02	6E-03	7E-02	ND	1E-03	ND	1E-02	ND	3E-03	2E-01	ND	6E-04	ND	ND	8E-01	8E+00
P32-VP-5	VP-5	8/7/2015	5	ND	4E-03	5E-02	1E-03	6E-03	ND	ND	ND	1E-03	ND	5E-03	3E-03	ND	2E-02	ND	8E-04	2E+00	5E+00
P32-VP-6	VP-6	8/7/2015	5	ND	2E-03	8E-03	1E-03	1E-02	ND	2E-03	ND	2E-03	2E-03	3E-03	5E-03	ND	2E-02	ND	ND	6E-02	2E+00
P32-VP-7	VP-7	8/7/2015	5	6E-04	2E-03	2E-02	ND	4E-03	ND	ND	ND	6E-04	ND	4E-03	1E-03	ND	1E-02	ND	ND	6E-02	2E+00
P32-VP-8	VP-8	8/7/2015	5	ND	1E-03	5E-03	ND	ND	ND	5E-04	ND	ND	ND	4E-03	ND	ND	2E-03	ND	ND	3E-02	2E+00
P32-VP-9	VP-9	8/7/2015	5	6E-04	2E-03	2E-02	3E-03	4E-02	ND	2E-03	ND	1E-02	1E-03	2E-03	2E-02	ND	5E-03	7E-04	7E-04	4E-01	2E+00
P32-VP-10	VP-10	8/7/2015	5	ND	1E-03	6E-02	1E-02	9E-02	ND	1E-03	ND	2E-02	ND	9E-04	1E-01	ND	1E-03	ND	5E-04	4E-01	3E+00
P32-VMW-1	VMW-1	11/23/2016	10	ND	4E-03	2E-03	ND	8E-03	ND	ND	ND	ND	ND	3E-03	2E-02	ND	7E-03	ND	ND	6E-03	1E-01
P32-VMW-1 (DUP)	VMW-1 (DUP)	11/23/2016	10	ND	4E-03	3E-03	ND	ND	ND	ND	ND	ND	ND	1E-01	2E-02	ND	7E-03	ND	ND	6E-03	4E-01
P32-VMW-1 (10')	VMW-1-10	11/28/2016	10	ND	3E-03	2E-03	ND	ND	ND	ND	ND	ND	ND	3E-03	3E-02	ND	7E-03	ND	ND	3E+00	ND
P32-VWM-2	VMW-2	11/23/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3E-02	ND	6E-03	ND	ND	5E-03	3E-01
P32-VMW-2 (5')	VMW-2-5	11/28/2016	5	ND	2E-03	2E-03	ND	ND	ND	ND	ND	ND	ND	4E-03	4E-02	ND	1E-02	ND	ND	3E+00	ND
P32-VWM-3	VWM-3	11/23/2016	15	1E-03	ND	1E-02	2E-03	1E-02	ND	ND	ND	1E-03	ND	1E-02	3E-02	3E-03	ND	ND	ND	9E-03	5E-01
P32-VMW-3 (15')	VMW-3-15	11/28/2016	15	ND	1E-03	6E-03	9E-04	3E-03	ND	ND	ND	ND	ND	2E-03	2E-02	ND	3E-03	ND	ND	9E-01	2E-01
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	11/28/2016	15	ND	1E-03	1E-02	9E-04	6E-03	ND	ND	ND	ND	ND	2E-03	6E-02	ND	3E-03	ND	ND	5E+00	3E-01
P32-VWM-4	VMW-4	11/23/2016	10	ND	ND	8E-03	ND	ND	ND	ND	ND	ND	ND	ND	1E-02	ND	4E-03	ND	ND	4E-03	2E-01
P32-VMW-4 (10')	VWM-4-10	11/28/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4E-02	ND	4E-03	ND	ND	3E+00	2E-01

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TABLE I-5b

Trench Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
2A-1-5	-	5/16/2017	5	2E-01	ND	ND	ND	ND	ND	NA	5E-02	ND	ND	ND	1E-01	NA	2E-02	8E-02	ND	ND	ND	ND
2A-1-10	-	5/16/2017	10	9E-04	ND	ND	ND	ND	ND	NA	8E-04	ND	ND	ND	1E-03	NA	ND	3E-03	ND	ND	ND	ND
2A-1-15	-	5/16/2017	15	4E-04	ND	ND	ND	ND	ND	NA	3E-04	ND	ND	ND	7E-04	NA	5E-05	3E-03	ND	ND	ND	ND
2A-2-5	-	5/16/2017	5	4E-01	ND	ND	ND	ND	ND	NA	3E-02	ND	ND	ND	9E-02	NA	1E-02	ND	ND	ND	ND	ND
2A-2-5 (DUP)	-	5/16/2017	5	4E-01	ND	ND	ND	ND	ND	NA	1E-01	ND	ND	ND	2E-01	NA	ND	9E-01	ND	ND	ND	ND
2A-2-10	-	5/16/2017	10	3E-03	ND	ND	ND	ND	ND	NA	1E-03	ND	ND	ND	1E-03	NA	ND	6E-03	ND	ND	ND	ND
2A-2-15	-	5/16/2017	15	7E-04	ND	ND	ND	ND	ND	NA	1E-04	ND	ND	ND	3E-04	NA	ND	ND	ND	ND	ND	ND
2A-3-5	-	5/16/2017	5	4E-02	ND	ND	ND	ND	ND	NA	2E-02	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-10	-	5/16/2017	10	4E-04	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-15	-	5/16/2017	15	2E-04	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-AM	-	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	4E+01	ND	ND	ND	6E+01	NA	ND	5E+01	ND	ND	ND	ND
P33-VP-1	VP-1	8/5/2015	5	5E-02	ND	ND	1E-02	2E-03	1E-02	ND	5E-03	ND	ND	6E-03	3E-02	ND	2E-03	ND	ND	ND	ND	ND
P33-VP-2	VP-2	8/5/2015	5	1E-01	ND	ND	5E-03	ND	9E-03	ND	1E-02	ND	ND	4E-03	6E-02	ND	2E-03	ND	ND	ND	ND	ND
P33-VP-3	VP-3	8/5/2015	5	2E-01	4E-03	ND	7E-03	ND	1E-02	ND	5E-03	ND	ND	6E-03	3E-02	ND	2E-03	ND	ND	ND	4E-03	ND
P32-VP-3 (DUP)	VP-3 (DUP)	8/5/2015	5	3E-01	7E-03	ND	7E-03	ND	1E-02	ND	2E-03	2E-03	ND	4E-03	3E-02	ND	ND	ND	ND	ND	6E-03	ND
P33-VP-4	VP-4	8/5/2015	5	ND	ND	ND	5E-03	ND	8E-03	ND	5E-03	ND	ND	2E-03	6E-02	ND	2E-03	ND	4E-03	ND	ND	2E-03
P33-VP-5	VP-5	8/5/2015	5	1E-01	4E-03	ND	7E-03	ND	1E-02	-	7E-03	ND	ND	6E-03	3E-02	ND	2E-03	ND	ND	ND	ND	ND
P33-VP-6	VP-6	8/5/2015	5	5E-03	ND	ND	5E-03	ND	1E-02	ND	5E-03	ND	ND	2E-03	3E-02	ND	2E-03	ND	ND	ND	ND	7E-03
P33-VP-7	VP-7	8/5/2015	5	7E-02	ND	ND	7E-03	2E-03	1E-02	-	5E-03	ND	4E-03	6E-03	3E-02	ND	2E-03	ND	ND	ND	ND	ND
P32-VP-7 (DUP)	VP-7 (DUP)	8/7/2015	5	1E-02	ND	ND	3E-02	8E-03	ND	-	7E-03	ND	7E-03	ND	6E-02	ND	2E-03	2E-02	ND	ND	ND	2E-03
P33-VP-8	VP-8	8/5/2015	5	3E-02	ND	ND	8E-03	2E-03	1E-02	-	5E-03	ND	2E-03	8E-03	3E-02	ND	2E-03	ND	ND	ND	4E-03	ND
P33-VP-9	VP-9	8/5/2015	5	2E-02	ND	ND	1E-02	2E-03	1E-02	-	5E-03	ND	2E-03	6E-03	3E-02	ND	2E-03	ND	ND	ND	ND	ND
P33-VP-9 (DUP)	VP-9 (DUP)	8/5/2015	5	2E-02	ND	ND	8E-03	2E-03	1E-02	-	5E-03	ND	2E-03	6E-03	3E-02	ND	5E-03	ND	ND	ND	ND	ND
P33-VP-10	VP-10	8/5/2015	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6E-03	ND	ND	ND	ND	ND	ND	ND
P33-VP-11	VP-11	8/5/2015	5	1E-02	ND	NA	7E-03	ND	1E-02	-	2E-03	ND	ND	8E-03	2E-02	ND	ND	ND	ND	ND	ND	ND
P33-VP-12	VP-12	8/5/2015	5	5E-03	ND	ND	5E-03	ND	1E-02	-	2E-03	ND	ND	4E-03	3E-02	ND	ND	ND	ND	ND	ND	ND

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TABLE I-5b

Trench Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P32-VP-1	VP-1	8/7/2015	5	9E-03	ND	ND	ND	ND	ND	ND	2E-02	ND	ND	ND	1E-01	3E-03	5E-03	3E-03	ND	ND	ND	ND
P32-VP-2	VP-2	8/7/2015	5	ND	ND	ND	3E-03	ND	ND	ND	2E-03	ND	ND	ND	3E-02	ND	1E-02	ND	ND	ND	ND	2E-03
P32-VP-3	VP-3	8/7/2015	5	1E-02	ND	ND	ND	ND	ND	ND	7E-03	ND	ND	ND	6E-02	ND	ND	9E-03	ND	ND	ND	ND
P32-VP-4	VP-4	8/7/2015	5	9E-03	ND	3E-03	1E-02	5E-03	ND	ND	2E-03	ND	4E-03	ND	6E-02	ND	ND	ND	ND	ND	ND	2E-03
P32-VP-5	VP-5	8/7/2015	5	7E-03	ND	ND	2E-03	ND	ND	ND	1E-02	ND	ND	ND	9E-02	ND	2E-03	3E-03	ND	ND	ND	ND
P32-VP-6	VP-6	8/7/2015	5	5E-03	ND	ND	2E-02	5E-03	ND	-	2E-03	ND	4E-03	ND	3E-02	ND	5E-03	ND	ND	ND	ND	ND
P32-VP-7	VP-7	8/7/2015	5	1E-02	ND	ND	ND	ND	ND	ND	7E-03	ND	ND	ND	6E-02	ND	2E-03	2E-02	ND	ND	ND	ND
P32-VP-8	VP-8	8/7/2015	5	1E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-02	ND	ND	ND	ND	ND	ND	ND
P32-VP-9	VP-9	8/7/2015	5	5E-03	ND	ND	3E-02	1E-02	ND	-	2E-02	ND	7E-03	ND	9E-02	3E-03	1E-02	6E-03	ND	ND	ND	2E-03
P32-VP-10	VP-10	8/7/2015	5	ND	ND	ND	7E-03	ND	ND	ND	1E-02	ND	2E-03	ND	6E-02	ND	ND	ND	ND	ND	ND	2E-03
P32-VMW-1	VMW-1	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-03	ND	ND	ND	ND	ND	ND	ND
P32-VMW-1 (DUP)	VMW-1 (DUP)	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-03	ND	ND	ND	ND	ND	2E-03	ND
P32-VMW-1 (10')	VMW-1-10	11/28/2016	10	8E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3E-04	ND	ND	ND	ND	ND	ND	ND
P32-VWM-2	VMW-2	11/23/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-01	ND	ND	ND	ND	ND	ND	ND
P32-VMW-2 (5')	VMW-2-5	11/28/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3E-02	ND	ND	ND	ND	ND	ND	ND
P32-VWM-3	VWM-3	11/23/2016	15	ND	ND	ND	ND	ND	ND	ND	1E-04	ND	ND	ND	3E-03	1E-04	7E-04	1E-04	ND	ND	ND	ND
P32-VMW-3 (15')	VMW-3-15	11/28/2016	15	5E-05	ND	ND	ND	ND	2E-05	ND	7E-05	ND	ND	ND	1E-03	ND	3E-04	2E-04	ND	5E-05	ND	4E-05
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	11/28/2016	15	4E-05	ND	ND	ND	ND	4E-05	ND	6E-05	ND	ND	ND	1E-03	7E-05	2E-04	2E-04	ND	4E-05	ND	4E-05
P32-VWM-4	VMW-4	11/23/2016	10	ND	ND	ND	ND	ND	ND	ND	1E-04	ND	ND	ND	5E-03	ND	ND	1E-04	ND	ND	ND	ND
P32-VMW-4 (10')	VWM-4-10	11/28/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8E-04	ND	ND	ND	ND	ND	ND	ND

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TABLE I-5b
Trench Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
2A-1-5	-	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	2E-02	*ND*	*ND*	*NA*	*ND*	*NA*	1E+00	6E-02	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-1-10	-	5/16/2017	10	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	6E-03	2E-04	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-1-15	-	5/16/2017	15	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	1E-04	*NA*	2E-03	1E-04	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-5	-	5/16/2017	5	*NA*	*ND*	*NA*	5E-02	1E-01	*ND*	*ND*	*NA*	7E-02	*NA*	5E-01	3E-02	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-5 (DUP)	-	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	3E-02	*ND*	*ND*	*NA*	2E-02	*NA*	5E-01	3E-02	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-10	-	5/16/2017	10	*NA*	*ND*	*NA*	*ND*	2E-04	2E-04	*ND*	*NA*	1E-04	*NA*	4E-03	2E-04	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-2-15	-	5/16/2017	15	*NA*	*ND*	*NA*	*ND*	7E-05	*ND*	*ND*	*NA*	*ND*	*NA*	4E-03	2E-04	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
2A-3-5	-	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	2E-02	*NA*	3E-02	*ND*	*ND*	5E-02	*ND*	*ND*	*NA*	*NA*
2A-3-10	-	5/16/2017	10	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	4E-04	*ND*	*ND*	5E-04	*ND*	*ND*	*NA*	*NA*
2A-3-15	-	5/16/2017	15	*NA*	*ND*	*NA*	*ND*	9E-05	*ND*	*ND*	*NA*	*ND*	*NA*	2E-04	8E-05	*ND*	1E-04	*ND*	*ND*	*NA*	*NA*
2A-AM	-	5/16/2017	Ambient	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
P33-VP-1	VP-1	8/5/2015	5	4E-03	8E-03	5E-01	4E-03	4E-02	*ND*	*ND*	*ND*	6E-03	2E-03	3E-02	6E-02	7E-02	9E-03	2E-03	*ND*	2E-01	9E+00
P33-VP-2	VP-2	8/5/2015	5	4E-03	*ND*	4E-01	2E-03	2E-02	*ND*	*ND*	*ND*	4E-03	*ND*	4E-02	2E-02	*NA*	5E-03	2E-03	*ND*	1E-01	5E+00
P33-VP-3	VP-3	8/5/2015	5	2E-03	6E-03	6E-01	4E-03	4E-02	*ND*	*ND*	*ND*	6E-03	*ND*	4E-02	4E-02	NA	2E-03	*ND*	*ND*	*NA*	5E+00
P32-VP-3 (DUP)	VP-3 (DUP)	8/5/2015	5	2E-03	6E-03	4E-01	4E-03	2E-02	*ND*	*ND*	*ND*	6E-03	*ND*	5E-02	2E-02	8E-01	4E-03	2E-03	*ND*	3E-01	7E+00
P33-VP-4	VP-4	8/5/2015	5	2E-03	*ND*	3E-01	7E-03	6E-02	3E-03	3E-03	*ND*	7E-03	*ND*	5E-03	2E-01	4E-03	*ND*	*ND*	*ND*	3E+00	6E+00
P33-VP-5	VP-5	8/5/2015	5	2E-03	2E-03	9E-01	6E-03	4E-02	*ND*	*ND*	*ND*	7E-03	*ND*	3E-02	8E-02	1E-01	4E-03	5E-03	*ND*	4E-01	9E+00
P33-VP-6	VP-6	8/5/2015	5	2E-03	*ND*	3E-01	4E-03	2E-02	3E-03	*ND*	*ND*	4E-03	*ND*	8E-03	6E-02	2E-02	*ND*	*ND*	*ND*	1E+00	4E+00
P33-VP-7	VP-7	8/5/2015	5	2E-03	6E-03	9E-01	6E-03	4E-02	*ND*	*ND*	*ND*	7E-03	*ND*	5E-02	4E-02	*ND*	4E-03	*ND*	*ND*	1E-01	5E+00
P32-VP-7 (DUP)	VP-7 (DUP)	8/7/2015	5	*ND*	6E-03	3E-01	6E-03	6E-02	*ND*	7E-02	3E-03	1E-02	2E-02	1E-02	8E-03	*ND*	4E-02	5E-03	3E-03	5E-01	5E+00
P33-VP-8	VP-8	8/5/2015	5	4E-03	2E-02	1E+00	6E-03	4E-02	*ND*	*ND*	*ND*	7E-03	*ND*	3E-02	2E-02	*ND*	4E-03	7E-03	*ND*	3E-01	5E+00
P33-VP-9	VP-9	8/5/2015	5	2E-03	4E-03	1E+00	6E-03	4E-02	*ND*	*ND*	*ND*	9E-03	*ND*	5E-02	8E-02	4E-03	2E-03	5E-03	*ND*	2E-01	5E+00
P33-VP-9 (DUP)	VP-9 (DUP)	8/5/2015	5	4E-03	4E-03	1E+00	6E-03	4E-02	*ND*	*ND*	*ND*	7E-03	*ND*	3E-02	4E-02	4E-03	*ND*	5E-03	*ND*	3E-01	6E+00
P33-VP-10	VP-10	8/5/2015	5	*ND*	*ND*	1E+00	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	3E-03	4E-03	*ND*	*ND*	*ND*	*ND*	*NA*	6E+00
P33-VP-11	VP-11	8/5/2015	5	2E-03	*ND*	9E-01	4E-03	4E-02	*ND*	*ND*	*ND*	6E-03	*ND*	3E-02	2E-02	*ND*	*ND*	2E-03	*ND*	1E-01	1E+01
P33-VP-12	VP-12	8/5/2015	5	2E-03	*ND*	9E-01	4E-03	2E-02	*ND*	*ND*	*ND*	6E-03	*ND*	9E-02	2E-02	*ND*	4E-03	*ND*	*ND*	1E-01	7E+00

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TABLE I-5b

Trench Air Exposure Point Concentrations and Ambient Air Concentration (at 2A-AM) (in μg/m^3)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
P32-VP-1	VP-1	8/7/2015	5	ND	1E-02	3E-01	2E-03	2E-02	ND	ND	ND	4E-03	ND	3E-02	4E-03	ND	2E-02	2E-03	9E-03	6E-01	5E+00
P32-VP-2	VP-2	8/7/2015	5	ND	ND	2E-02	2E-03	2E-02	ND	1E-02	ND	4E-03	ND	ND	2E-02	ND	ND	ND	ND	6E+00	7E+00
P32-VP-3	VP-3	8/7/2015	5	ND	4E-03	4E-02	ND	ND	ND	ND	ND	ND	ND	1E-02	2E-03	ND	7E-03	ND	ND	3E+00	1E+01
P32-VP-4	VP-4	8/7/2015	5	ND	2E-03	9E-02	2E-02	2E-01	ND	3E-03	ND	4E-02	ND	8E-03	6E-01	ND	2E-03	ND	ND	3E+00	3E+01
P32-VP-5	VP-5	8/7/2015	5	ND	1E-02	2E-01	4E-03	2E-02	ND	ND	ND	4E-03	ND	1E-02	8E-03	ND	5E-02	ND	3E-03	6E+00	2E+01
P32-VP-6	VP-6	8/7/2015	5	ND	6E-03	3E-02	4E-03	4E-02	ND	5E-03	ND	7E-03	5E-03	9E-03	2E-02	ND	5E-02	ND	ND	2E-01	6E+00
P32-VP-7	VP-7	8/7/2015	5	2E-03	6E-03	9E-02	ND	1E-02	ND	ND	ND	2E-03	ND	1E-02	4E-03	ND	4E-02	ND	ND	2E-01	6E+00
P32-VP-8	VP-8	8/7/2015	5	ND	4E-03	2E-02	ND	ND	ND	2E-03	ND	ND	ND	1E-02	ND	ND	5E-03	ND	ND	8E-02	5E+00
P32-VP-9	VP-9	8/7/2015	5	2E-03	6E-03	9E-02	9E-03	1E-01	ND	7E-03	ND	4E-02	3E-03	7E-03	6E-02	ND	2E-02	2E-03	3E-03	1E+00	6E+00
P32-VP-10	VP-10	8/7/2015	5	ND	4E-03	2E-01	4E-02	3E-01	ND	3E-03	ND	6E-02	ND	3E-03	4E-01	ND	4E-03	ND	2E-03	1E+00	1E+01
P32-VMW-1	VMW-1	11/23/2016	10	ND	2E-04	1E-04	ND	4E-04	ND	ND	ND	ND	ND	1E-04	1E-03	ND	3E-04	ND	ND	3E-04	7E-03
P32-VMW-1 (DUP)	VMW-1 (DUP)	11/23/2016	10	ND	2E-04	2E-04	ND	ND	ND	ND	ND	ND	ND	6E-03	8E-04	ND	3E-04	ND	ND	3E-04	2E-02
P32-VMW-1 (10')	VMW-1-10	11/28/2016	10	ND	2E-04	8E-05	ND	ND	ND	ND	ND	ND	ND	1E-04	1E-03	ND	3E-04	ND	ND	2E-01	ND
P32-VWM-2	VMW-2	11/23/2016	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8E-02	ND	2E-02	ND	ND	2E-02	9E-01
P32-VMW-2 (5')	VMW-2-5	11/28/2016	5	ND	8E-03	9E-03	ND	ND	ND	ND	ND	ND	ND	1E-02	1E-01	ND	4E-02	ND	ND	9E+00	ND
P32-VWM-3	VWM-3	11/23/2016	15	3E-05	ND	3E-04	6E-05	3E-04	ND	ND	ND	4E-05	ND	3E-04	7E-04	7E-05	ND	ND	ND	2E-04	1E-02
P32-VMW-3 (15')	VMW-3-15	11/28/2016	15	ND	3E-05	2E-04	2E-05	7E-05	ND	ND	ND	ND	ND	5E-05	6E-04	ND	7E-05	ND	ND	2E-02	4E-03
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	11/28/2016	15	ND	3E-05	3E-04	2E-05	1E-04	ND	ND	ND	ND	ND	4E-05	2E-03	ND	7E-05	ND	ND	1E-01	8E-03
P32-VWM-4	VMW-4	11/23/2016	10	ND	ND	4E-04	ND	ND	ND	ND	ND	ND	ND	ND	6E-04	ND	2E-04	ND	ND	2E-04	8E-03
P32-VMW-4 (10')	VWM-4-10	11/28/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-03	ND	2E-04	ND	ND	1E-01	8E-03

The Fehling Group, LLC

TABLE I-6
Soil Risk Characterization Summary
~ PARC Area 2A, 2B, and 2C ~

		Soil RBC (mg/kg)*				Risk Values (Incremental Lifetime Cancer Risk [ILCR] and Hazard Quotient [HQ])			
		Residential Receptor		Construction Worker Receptor		Residential Receptor		Construction Worker Receptor	
Soil COPC	**Soil EPC (mg/kg, dry weight basis)**	**Cancer Endpoint**	**Noncancer Endpoint**	**Cancer Endpoint**	**Noncancer Endpoint**	**ILCR (unitless)**	**HQ (unitless)**	**ILCR (unitless)**	**HQ (unitless)**
Barium	81	--	1.50E+04	--	3.02E+03	--	5.4E-03	--	2.7E-02
Copper	17	--	3.10E+03	--	1.42E+04	--	5.6E-03	--	1.2E-03
Lead	28	Not applicable (see Section 3.2.1.2)							
Mercury	0.54	--	1.01E+00	--	4.36E+01	--	5.4E-01	--	1.2E-02
TPH-GRO	50	--	8.20E+01	--	2.77E+03	--	6.1E-01	--	1.8E-02
TPH-DRO	14	--	9.60E+01	--	8.85E+02	--	1.4E-01	--	1.5E-02
THP-ORO	15	--	2.50E+03	--	3.24E+04	--	5.8E-03	--	4.5E-04
		Cumulative Risk Values (ILCR and HI Values) =>				**0.0E+00**	**1.3E+00**	**0.0E+00**	**7.4E-02**

* "Combined" value listed in **Table 5** for the residential receptor and **Table 6** for the construction worker receptor.

The Fehling Group, LLC

TABLE I-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
2A-1-5	-	5		*ND*	*ND*				*NA*							**5E-08**				*ND*	
2A-1-10	-	10		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-1-15	-	15		*ND*	*ND*				*NA*							**2E-08**				*ND*	
2A-2-5	-	5		*ND*	*ND*				*NA*							**4E-08**				*ND*	
2A-2-5 (DUP)	-	5		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-2-10	-	10		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-2-15	-	15		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-3-5	-	5		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-3-10	-	10		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-3-15	-	15		*ND*	*ND*				*NA*							*ND*				*ND*	
2A-AM	-	Ambient		*ND*	*ND*				*NA*							*ND*				*ND*	
P33-VP-1	VP-1	5		*ND*	*ND*				*ND*							**6E-09**				*ND*	
P33-VP-2	VP-2	5		*ND*	*ND*				*ND*							**6E-09**				*ND*	
P33-VP-3	VP-3	5		**8E-10**	*ND*				*ND*							**6E-09**				**1E-08**	
P33-VP-3 (DUP)	VP-3 (DUP)	5		**1E-09**	*ND*				*ND*							*ND*				**2E-08**	
P33-VP-4	VP-4	5		*ND*	*ND*				*ND*							**6E-09**				*ND*	
P33-VP-5	VP-5	5		**8E-10**	*ND*				-							**6E-09**				*ND*	
P33-VP-6	VP-6	5		*ND*	*ND*				*ND*							**7E-09**				*ND*	
P33-VP-7	VP-7	5		*ND*	*ND*				-							**6E-09**				*ND*	
P32-VP-7 (DUP)	VP-7 (DUP)	5		*ND*	*ND*				-							**7E-09**				*ND*	
P33-VP-8	VP-8	5		*ND*	*ND*				-							**7E-09**				**1E-08**	
P33-VP-9	VP-9	5		*ND*	*ND*				-							**6E-09**				*ND*	
P33-VP-9 (DUP)	VP-9 (DUP)	5		*ND*	*ND*				-							**1E-08**				*ND*	
P33-VP-10	VP-10	5		*ND*	*ND*				*ND*							*ND*				*ND*	
P33-VP-11	VP-11	5		*ND*	*NA*				-							*ND*				*ND*	
P33-VP-12	VP-12	5		*ND*	*ND*				-							*ND*				*ND*	

NONCARCINOGENIC

The Fehling Group, LLC

TABLE I-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P32-VP-1	VP-1	5		ND	ND				ND							1E-08				ND	
P32-VP-2	VP-2	5		ND	ND				ND							4E-08				ND	
P32-VP-3	VP-3	5		ND	ND				ND							ND				ND	
P32-VP-4	VP-4	5		ND	3E-09				ND							ND				ND	
P32-VP-5	VP-5	5	NONCARCINOGENIC	ND	ND	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	ND	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	7E-09	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	ND	NONCARCINOGENIC
P32-VP-6	VP-6	5		ND	ND				-							1E-08				ND	
P32-VP-7	VP-7	5		ND	ND				ND							7E-09				ND	
P32-VP-8	VP-8	5		ND	ND				ND							ND				ND	
P32-VP-9	VP-9	5		ND	ND				-							3E-08				ND	
P32-VP-10	VP-10	5		ND	ND				ND							ND				ND	
P32-VMW-1	VMW-1	10		ND	ND				ND							ND				ND	
P32-VMW-1 (DUP)	VMW-1 (DUP)	10		ND	ND				ND							ND				4E-07	
P32-VMW-1 (10')	VMW-1-10	10		ND	ND				ND							ND				ND	
P32-VWM-2	VMW-2	5		ND	ND				ND							ND				ND	
P32-VMW-2 (5')	VMW-2-5	5		ND	ND				ND							ND				ND	
P32-VWM-3	VWM-3	15		ND	ND				ND							3E-07				ND	
P32-VMW-3 (15')	VMW-3-15	15		ND	ND				ND							1E-07				ND	
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15		ND	ND				ND							8E-08				ND	
P32-VWM-4	VMW-4	10		ND	ND				ND							ND				ND	
P32-VMW-4 (10')	VWM-4-10	10		ND	ND				ND							ND				ND	

The Fehling Group, LLC

TABLE I-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
2A-1-5	-	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	*ND*	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	8E-07	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	9E-07
2A-1-10	-	10				*ND*		*ND*	*ND*				3E-07		*ND*			*ND*			3E-07
2A-1-15	-	15				*ND*		*ND*	*ND*				2E-07		*ND*			*ND*			2E-07
2A-2-5	-	5				1E-08		*ND*	*ND*				4E-07		*ND*			*ND*			4E-07
2A-2-5 (DUP)	-	5				*ND*		*ND*	*ND*				4E-07		*ND*			*ND*			4E-07
2A-2-10	-	10				*ND*		3E-09	*ND*				2E-07		*ND*			*ND*			2E-07
2A-2-15	-	15				*ND*		*ND*	*ND*				4E-07		*ND*			*ND*			4E-07
2A-3-5	-	5				*ND*		*ND*	*ND*				2E-08		*ND*			*ND*			2E-08
2A-3-10	-	10				*ND*		*ND*	*ND*				2E-08		*ND*			*ND*			2E-08
2A-3-15	-	15				*ND*		*ND*	*ND*				1E-08		*ND*			*ND*			1E-08
2A-AM	-	Ambient				*ND*		*ND*	*ND*				*ND*		*ND*			*ND*			0E+00
P33-VP-1	VP-1	5				1E-09		*ND*	*ND*				2E-08		5E-08			*ND*			8E-08
P33-VP-2	VP-2	5				5E-10		*ND*	*ND*				3E-08		*NA*			*ND*			4E-08
P33-VP-3	VP-3	5				1E-09		*ND*	*ND*				3E-08		NA			*ND*			5E-08
P33-VP-3 (DUP)	VP-3 (DUP)	5				1E-09		*ND*	*ND*				4E-08		5E-07			*ND*			6E-07
P33-VP-4	VP-4	5				2E-09		7E-10	1E-08				4E-09		2E-09			*ND*			3E-08
P33-VP-5	VP-5	5				2E-09		*ND*	*ND*				2E-08		1E-07			*ND*			1E-07
P33-VP-6	VP-6	5				1E-09		7E-10	*ND*				6E-09		1E-08			*ND*			3E-08
P33-VP-7	VP-7	5				2E-09		*ND*	*ND*				4E-08		*ND*			*ND*			5E-08
P32-VP-7 (DUP)	VP-7 (DUP)	5				2E-09		*ND*	3E-07				9E-09		*ND*			8E-08			4E-07
P33-VP-8	VP-8	5				2E-09		*ND*	*ND*				2E-08		*ND*			*ND*			4E-08
P33-VP-9	VP-9	5				2E-09		*ND*	*ND*				4E-08		2E-09			*ND*			5E-08
P33-VP-9 (DUP)	VP-9 (DUP)	5				2E-09		*ND*	*ND*				2E-08		2E-09			*ND*			4E-08
P33-VP-10	VP-10	5				*ND*		*ND*	*ND*				2E-09		*ND*			*ND*			2E-09
P33-VP-11	VP-11	5				1E-09		*ND*	*ND*				2E-08		*ND*			*ND*			2E-08
P33-VP-12	VP-12	5				1E-09		*ND*	*ND*				7E-08		*ND*			*ND*			7E-08

The Fehling Group, LLC

TABLE I-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
P32-VP-1	VP-1	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	5E-10	NONCARCINOGENIC	ND	ND	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	2E-08	NONCARCINOGENIC	ND	NONCARCINOGENIC	NONCARCINOGENIC	3E-07	NONCARCINOGENIC	NONCARCINOGENIC	3E-07
P32-VP-2	VP-2	5				5E-10		ND	4E-08				ND		ND			ND			8E-08
P32-VP-3	VP-3	5				ND		ND	ND				1E-08		ND			ND			1E-08
P32-VP-4	VP-4	5				5E-09		ND	1E-08				6E-09		ND			ND			3E-08
P32-VP-5	VP-5	5				1E-09		ND	ND				1E-08		ND			8E-08			1E-07
P32-VP-6	VP-6	5				1E-09		ND	2E-08				7E-09		ND			ND			4E-08
P32-VP-7	VP-7	5				ND		ND	ND				9E-09		ND			ND			2E-08
P32-VP-8	VP-8	5				ND		ND	6E-09				8E-09		ND			ND			1E-08
P32-VP-9	VP-9	5				3E-09		ND	3E-08				5E-09		ND			7E-08			1E-07
P32-VP-10	VP-10	5				1E-08		ND	1E-08				2E-09		ND			6E-08			8E-08
P32-VMW-1	VMW-1	10				ND		ND	ND				6E-09		ND			ND			6E-09
P32-VMW-1 (DUP)	VMW-1 (DUP)	10				ND		ND	ND				3E-07		ND			ND			7E-07
P32-VMW-1 (10')	VMW-1-10	10				ND		ND	ND				6E-09		ND			ND			6E-09
P32-VWM-2	VMW-2	5				ND		ND	ND				ND		ND			ND			0E+00
P32-VMW-2 (5')	VMW-2-5	5				ND		ND	ND				9E-09		ND			ND			9E-09
P32-VWM-3	VWM-3	15				2E-09		ND	ND				2E-08		6E-09			ND			3E-07
P32-VMW-3 (15')	VMW-3-15	15				8E-10		ND	ND				4E-09		ND			ND			1E-07
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15				8E-10		ND	ND				3E-09		ND			ND			8E-08
P32-VWM-4	VMW-4	10				ND		ND	ND				ND		ND			ND			0E+00
P32-VMW-4 (10')	VWM-4-10	10				ND		ND	ND				ND		ND			ND			0E+00

The Fehling Group, LLC

TABLE I-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
2A-1-5	-	5	5E-05	ND	ND	ND	ND	ND	NA	3E-06	ND	ND	ND	9E-07	NA	1E-03	3E-05	ND	ND	ND	ND
2A-1-10	-	10	2E-05	ND	ND	ND	ND	ND	NA	3E-06	ND	ND	ND	9E-07	NA	ND	9E-05	ND	ND	ND	ND
2A-1-15	-	15	2E-05	ND	ND	ND	ND	ND	NA	2E-06	ND	ND	ND	9E-07	NA	7E-04	2E-04	ND	ND	ND	ND
2A-2-5	-	5	1E-04	ND	ND	ND	ND	ND	NA	2E-06	ND	ND	ND	8E-07	NA	1E-03	ND	ND	ND	ND	ND
2A-2-5 (DUP)	-	5	1E-04	ND	ND	ND	ND	ND	NA	8E-06	ND	ND	ND	2E-06	NA	ND	3E-04	ND	ND	ND	ND
2A-2-10	-	10	7E-05	ND	ND	ND	ND	ND	NA	5E-06	ND	ND	ND	9E-07	NA	ND	2E-04	ND	ND	ND	ND
2A-2-15	-	15	3E-05	ND	ND	ND	ND	ND	NA	8E-07	ND	ND	ND	3E-07	NA	ND	ND	ND	ND	ND	ND
2A-3-5	-	5	1E-05	ND	ND	ND	ND	ND	NA	1E-06	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-10	-	10	9E-06	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-15	-	15	6E-06	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-AM	-	Ambient	ND	ND	ND	ND	ND	ND	NA	7E-03	ND	ND	ND	2E-03	NA	ND	7E-02	ND	ND	ND	ND
P33-VP-1	VP-1	5	2E-05	ND	ND	5E-05	8E-06	2E-05	ND	3E-07	ND	ND	6E-07	3E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-2	VP-2	5	4E-05	ND	ND	2E-05	ND	1E-05	ND	6E-07	ND	ND	4E-07	5E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-3	VP-3	5	5E-05	2E-06	ND	3E-05	ND	2E-05	ND	3E-07	ND	ND	6E-07	3E-07	ND	2E-04	ND	ND	ND	1E-05	ND
P33-VP-3 (DUP)	VP-3 (DUP)	5	8E-05	2E-06	ND	3E-05	ND	2E-05	ND	1E-07	2E-05	ND	4E-07	3E-07	ND	ND	ND	ND	ND	2E-05	ND
P33-VP-4	VP-4	5	ND	ND	ND	2E-05	ND	1E-05	ND	3E-07	ND	ND	2E-07	5E-07	ND	2E-04	ND	2E-05	ND	ND	6E-06
P33-VP-5	VP-5	5	4E-05	2E-06	ND	3E-05	ND	2E-05	-	4E-07	ND	ND	6E-07	3E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-6	VP-6	5	2E-06	ND	ND	2E-05	ND	2E-05	ND	3E-07	ND	ND	2E-07	3E-07	ND	2E-04	ND	ND	ND	ND	2E-05
P33-VP-7	VP-7	5	2E-05	ND	ND	3E-05	8E-06	2E-05	-	3E-07	ND	1E-05	6E-07	3E-07	ND	2E-04	ND	ND	ND	ND	ND
P32-VP-7 (DUP)	VP-7 (DUP)	5	3E-06	ND	ND	2E-04	4E-05	ND	-	4E-07	ND	2E-05	ND	5E-07	ND	2E-04	8E-06	ND	ND	ND	6E-06
P33-VP-8	VP-8	5	1E-05	ND	ND	4E-05	8E-06	2E-05	-	3E-07	ND	6E-06	8E-07	3E-07	ND	2E-04	ND	ND	ND	1E-05	ND
P33-VP-9	VP-9	5	5E-06	ND	ND	5E-05	8E-06	2E-05	-	3E-07	ND	6E-06	6E-07	3E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-9 (DUP)	VP-9 (DUP)	5	5E-06	ND	ND	4E-05	8E-06	2E-05	-	3E-07	ND	6E-06	6E-07	3E-07	ND	4E-04	ND	ND	ND	ND	ND
P33-VP-10	VP-10	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5E-08	ND	ND	ND	ND	ND	ND	ND
P33-VP-11	VP-11	5	4E-06	ND	NA	3E-05	ND	2E-05	-	1E-07	ND	ND	8E-07	2E-07	ND	ND	ND	ND	ND	ND	ND
P33-VP-12	VP-12	5	2E-06	ND	ND	2E-05	ND	2E-05	-	1E-07	ND	ND	4E-07	2E-07	ND	ND	ND	ND	ND	ND	ND

The Fehling Group, LLC

TABLE I-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P32-VP-1	VP-1	5	3E-06	ND	ND	ND	ND	ND	ND	1E-06	ND	ND	ND	1E-06	1E-05	4E-04	1E-06	ND	ND	ND	ND
P32-VP-2	VP-2	5	ND	ND	ND	2E-05	ND	ND	ND	1E-07	ND	ND	ND	3E-07	ND	1E-03	ND	ND	ND	ND	5E-06
P32-VP-3	VP-3	5	4E-06	ND	ND	ND	ND	ND	ND	4E-07	ND	ND	ND	5E-07	ND	ND	3E-06	ND	ND	ND	ND
P32-VP-4	VP-4	5	3E-06	ND	5E-04	6E-05	2E-05	ND	ND	1E-07	ND	1E-05	ND	5E-07	ND	ND	ND	ND	ND	ND	6E-06
P32-VP-5	VP-5	5	2E-06	ND	ND	8E-06	ND	ND	ND	7E-07	ND	ND	ND	8E-07	ND	2E-04	1E-06	ND	ND	ND	ND
P32-VP-6	VP-6	5	2E-06	ND	ND	8E-05	2E-05	ND	-	1E-07	ND	1E-05	ND	3E-07	ND	4E-04	ND	ND	ND	ND	ND
P32-VP-7	VP-7	5	3E-06	ND	ND	ND	ND	ND	ND	4E-07	ND	ND	ND	5E-07	ND	2E-04	8E-06	ND	ND	ND	ND
P32-VP-8	VP-8	5	4E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-07	ND	ND	ND	ND	ND	ND	ND
P32-VP-9	VP-9	5	2E-06	ND	ND	2E-04	6E-05	ND	-	1E-06	ND	2E-05	ND	8E-07	1E-05	9E-04	2E-06	ND	ND	ND	7E-06
P32-VP-10	VP-10	5	ND	ND	ND	3E-05	ND	ND	ND	6E-07	ND	6E-06	ND	5E-07	ND	ND	ND	ND	ND	ND	7E-06
P32-VMW-1	VMW-1	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-06	ND	ND	ND	ND	ND	ND	ND
P32-VMW-1 (DUP)	VMW-1 (DUP)	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-06	ND	ND	ND	ND	ND	5E-04	ND
P32-VMW-1 (10')	VMW-1-10	10	2E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-07	ND	ND	ND	ND	ND	ND	ND
P32-VWM-2	VMW-2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-06	ND	ND	ND	ND	ND	ND	ND
P32-VMW-2 (5')	VMW-2-5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3E-07	ND	ND	ND	ND	ND	ND	ND
P32-VWM-3	VWM-3	15	ND	ND	ND	ND	ND	ND	ND	7E-07	ND	ND	ND	4E-06	8E-05	8E-03	6E-06	ND	ND	ND	ND
P32-VMW-3 (15')	VMW-3-15	15	2E-06	ND	ND	ND	ND	5E-06	ND	5E-07	ND	ND	ND	1E-06	ND	3E-03	1E-05	ND	2E-07	ND	2E-05
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15	2E-06	ND	ND	ND	ND	8E-06	ND	4E-07	ND	ND	ND	1E-06	4E-05	2E-03	1E-05	ND	2E-07	ND	2E-05
P32-VWM-4	VMW-4	10	ND	ND	ND	ND	ND	ND	ND	5E-07	ND	ND	ND	3E-06	ND	ND	4E-06	ND	ND	ND	ND
P32-VMW-4 (10')	VWM-4-10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5E-07	ND	ND	ND	ND	ND	ND	ND

The Fehling Group, LLC

TABLE I-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
2A-1-5	-	5	NA	ND	NA	ND	6E-05	ND	ND	NA	ND	NA	9E-03	6E-05	ND	ND	ND	ND	NA	NA	1E-02
2A-1-10	-	10	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	3E-03	1E-05	ND	ND	ND	ND	NA	NA	3E-03
2A-1-15	-	15	NA	ND	NA	ND	ND	ND	ND	NA	6E-05	NA	2E-03	1E-05	ND	ND	ND	ND	NA	NA	3E-03
2A-2-5	-	5	NA	ND	NA	2E-05	4E-04	ND	ND	NA	2E-04	NA	4E-03	3E-05	ND	ND	ND	ND	NA	NA	6E-03
2A-2-5 (DUP)	-	5	NA	ND	NA	ND	1E-04	ND	ND	NA	5E-05	NA	4E-03	3E-05	ND	ND	ND	ND	NA	NA	5E-03
2A-2-10	-	10	NA	ND	NA	ND	5E-05	8E-06	ND	NA	3E-05	NA	2E-03	1E-05	ND	ND	ND	ND	NA	NA	2E-03
2A-2-15	-	15	NA	ND	NA	ND	3E-05	ND	ND	NA	ND	NA	4E-03	3E-05	ND	ND	ND	ND	NA	NA	4E-03
2A-3-5	-	5	NA	ND	NA	ND	ND	ND	ND	NA	5E-05	NA	3E-04	ND	ND	1E-05	ND	ND	NA	NA	3E-04
2A-3-10	-	10	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	2E-04	ND	ND	8E-06	ND	ND	NA	NA	2E-04
2A-3-15	-	15	NA	ND	NA	ND	4E-05	ND	ND	NA	ND	NA	2E-04	1E-05	ND	5E-06	ND	ND	NA	NA	2E-04
2A-AM	-	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA	8E-02
P33-VP-1	VP-1	5	2E-07	2E-05	-	1E-06	1E-04	ND	ND	ND	2E-05	5E-07	2E-04	6E-05	1E-02	2E-06	3E-06	ND	2E-04	8E-02	1E-01
P33-VP-2	VP-2	5	2E-07	ND	-	6E-07	6E-05	ND	ND	ND	1E-05	ND	3E-04	2E-05	NA	1E-06	3E-06	ND	2E-04	4E-02	4E-02
P33-VP-3	VP-3	5	1E-07	2E-05	-	1E-06	1E-04	ND	ND	ND	2E-05	ND	3E-04	4E-05	NA	4E-07	ND	ND	NA	5E-02	5E-02
P33-VP-3 (DUP)	VP-3 (DUP)	5	1E-07	2E-05	-	1E-06	6E-05	ND	ND	ND	2E-05	ND	4E-04	2E-05	1E-01	9E-07	3E-06	ND	5E-04	7E-02	2E-01
P33-VP-4	VP-4	5	1E-07	ND	-	2E-06	2E-04	2E-06	3E-04	ND	2E-05	ND	4E-05	2E-04	5E-04	ND	ND	ND	4E-03	6E-02	7E-02
P33-VP-5	VP-5	5	1E-07	6E-06	-	2E-06	1E-04	ND	ND	ND	2E-05	ND	2E-04	8E-05	2E-02	9E-07	6E-06	ND	7E-04	8E-02	1E-01
P33-VP-6	VP-6	5	1E-07	ND	-	1E-06	6E-05	2E-06	ND	ND	1E-05	ND	7E-05	6E-05	3E-03	ND	ND	ND	2E-03	4E-02	4E-02
P33-VP-7	VP-7	5	1E-07	2E-05	-	2E-06	1E-04	ND	ND	ND	2E-05	ND	4E-04	4E-05	ND	9E-07	ND	ND	2E-04	4E-02	4E-02
P32-VP-7 (DUP)	VP-7 (DUP)	5	ND	2E-05	-	2E-06	2E-04	ND	7E-03	1E-06	3E-05	5E-06	1E-04	8E-06	ND	9E-06	6E-06	8E-06	7E-04	5E-02	6E-02
P33-VP-8	VP-8	5	2E-07	5E-05	-	2E-06	1E-04	ND	ND	ND	2E-05	ND	2E-04	2E-05	ND	9E-07	1E-05	ND	4E-04	5E-02	5E-02
P33-VP-9	VP-9	5	1E-07	1E-05	-	2E-06	1E-04	ND	ND	ND	3E-05	ND	4E-04	8E-05	5E-04	4E-07	6E-06	ND	3E-04	5E-02	5E-02
P33-VP-9 (DUP)	VP-9 (DUP)	5	2E-07	1E-05	-	2E-06	1E-04	ND	ND	ND	2E-05	ND	2E-04	4E-05	5E-04	ND	6E-06	ND	4E-04	6E-02	6E-02
P33-VP-10	VP-10	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	2E-05	4E-06	ND	ND	ND	ND	NA	6E-02	6E-02
P33-VP-11	VP-11	5	1E-07	ND	-	1E-06	1E-04	ND	ND	ND	2E-05	ND	2E-04	2E-05	ND	ND	3E-06	ND	2E-04	1E-01	1E-01
P33-VP-12	VP-12	5	1E-07	ND	-	1E-06	6E-05	ND	ND	ND	2E-05	ND	8E-04	2E-05	ND	9E-07	ND	ND	2E-04	7E-02	7E-02

The Fehling Group, LLC

TABLE I-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
P32-VP-1	VP-1	5	*ND*	3E-05	-	6E-07	6E-05	*ND*	*ND*	*ND*	1E-05	*ND*	2E-04	4E-06	*ND*	4E-06	3E-06	2E-05	9E-04	5E-02	5E-02
P32-VP-2	VP-2	5	*ND*	*ND*	-	6E-07	6E-05	*ND*	1E-03	*ND*	1E-05	*ND*	*ND*	2E-05	*ND*	*ND*	*ND*	*ND*	9E-03	7E-02	8E-02
P32-VP-3	VP-3	5	*ND*	1E-05	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	1E-04	2E-06	*ND*	2E-06	*ND*	*ND*	4E-03	1E-01	1E-01
P32-VP-4	VP-4	5	*ND*	6E-06	-	6E-06	7E-04	*ND*	3E-04	*ND*	1E-04	*ND*	7E-05	6E-04	*ND*	4E-07	*ND*	*ND*	4E-03	3E-01	3E-01
P32-VP-5	VP-5	5	*ND*	4E-05	-	1E-06	6E-05	*ND*	*ND*	*ND*	1E-05	*ND*	1E-04	8E-06	*ND*	1E-05	*ND*	8E-06	9E-03	2E-01	2E-01
P32-VP-6	VP-6	5	*ND*	2E-05	-	1E-06	1E-04	*ND*	5E-04	*ND*	2E-05	2E-06	8E-05	2E-05	*ND*	1E-05	*ND*	*ND*	3E-04	5E-02	6E-02
P32-VP-7	VP-7	5	1E-07	2E-05	-	*ND*	4E-05	*ND*	*ND*	*ND*	6E-06	*ND*	1E-04	4E-06	*ND*	9E-06	*ND*	*ND*	3E-04	6E-02	6E-02
P32-VP-8	VP-8	5	*ND*	1E-05	-	*ND*	*ND*	*ND*	2E-04	*ND*	*ND*	*ND*	9E-05	*ND*	*ND*	1E-06	*ND*	*ND*	1E-04	5E-02	5E-02
P32-VP-9	VP-9	5	1E-07	2E-05	-	3E-06	4E-04	*ND*	7E-04	*ND*	1E-04	1E-06	5E-05	6E-05	*ND*	4E-06	3E-06	7E-06	2E-03	5E-02	6E-02
P32-VP-10	VP-10	5	*ND*	1E-05	-	1E-05	9E-04	*ND*	3E-04	*ND*	2E-04	*ND*	2E-05	4E-04	*ND*	9E-07	*ND*	5E-06	2E-03	1E-01	1E-01
P32-VMW-1	VMW-1	10	*ND*	4E-05	-	*ND*	8E-05	*ND*	*ND*	*ND*	*ND*	*ND*	7E-05	7E-05	*ND*	6E-06	*ND*	*ND*	3E-05	5E-03	5E-03
P32-VMW-1 (DUP)	VMW-1 (DUP)	10	*ND*	4E-05	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	3E-03	5E-05	*ND*	6E-06	*ND*	*ND*	3E-05	1E-02	2E-02
P32-VMW-1 (10')	VMW-1-10	10	*ND*	3E-05	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	7E-05	8E-05	*ND*	6E-06	*ND*	*ND*	2E-02	*ND*	2E-02
P32-VWM-2	VMW-2	5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	8E-05	*ND*	4E-06	*ND*	*ND*	2E-05	9E-03	9E-03
P32-VMW-2 (5')	VMW-2-5	5	*ND*	2E-05	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	1E-04	1E-04	*ND*	9E-06	*ND*	*ND*	1E-02	*ND*	1E-02
P32-VWM-3	VWM-3	15	2E-07	*ND*	-	2E-06	1E-04	*ND*	*ND*	*ND*	1E-05	*ND*	3E-04	9E-05	1E-03	*ND*	*ND*	*ND*	4E-05	2E-02	3E-02
P32-VMW-3 (15')	VMW-3-15	15	*ND*	1E-05	-	9E-07	3E-05	*ND*	*ND*	*ND*	*ND*	*ND*	5E-05	7E-05	*ND*	2E-06	*ND*	*ND*	4E-03	5E-03	1E-02
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15	*ND*	1E-05	-	9E-07	6E-05	*ND*	*ND*	*ND*	*ND*	*ND*	4E-05	2E-04	*ND*	2E-06	*ND*	*ND*	2E-02	1E-02	4E-02
P32-VWM-4	VMW-4	10	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	4E-05	*ND*	3E-06	*ND*	*ND*	2E-05	6E-03	6E-03
P32-VWM-4 (10')	VWM-4-10	10	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	1E-04	*ND*	3E-06	*ND*	*ND*	1E-02	6E-03	2E-02

The Fehling Group, LLC

TABLE I-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
2A-1-5	-	5		ND	ND				NA							1E-09				ND	
2A-1-10	-	10		ND	ND				NA							ND				ND	
2A-1-15	-	15		ND	ND				NA							5E-12				ND	
2A-2-5	-	5		ND	ND				NA							1E-09				ND	
2A-2-5 (DUP)	-	5		ND	ND				NA							ND				ND	
2A-2-10	-	10		ND	ND				NA							ND				ND	
2A-2-15	-	15		ND	ND				NA							ND				ND	
2A-3-5	-	5		ND	ND				NA							ND				ND	
2A-3-10	-	10		ND	ND				NA							ND				ND	
2A-3-15	-	15		ND	ND				NA							ND				ND	
2A-AM	-	Ambient		ND	ND				NA							ND				ND	
P33-VP-1	VP-1	5		ND	ND				ND							2E-10				ND	
P33-VP-2	VP-2	5		ND	ND				ND							2E-10				ND	
P33-VP-3	VP-3	5		2E-11	ND				ND							2E-10				3E-10	
P33-VP-3 (DUP)	VP-3 (DUP)	5		4E-11	ND				ND							ND				5E-10	
P33-VP-4	VP-4	5		ND	ND				ND							2E-10				ND	
P33-VP-5	VP-5	5		2E-11	ND				-							2E-10				ND	
P33-VP-6	VP-6	5		ND	ND				ND							2E-10				ND	
P33-VP-7	VP-7	5		ND	ND				-							2E-10				ND	
P32-VP-7 (DUP)	VP-7 (DUP)	5		ND	ND				-							2E-10				ND	
P33-VP-8	VP-8	5		ND	ND				-							2E-10				3E-10	
P33-VP-9	VP-9	5		ND	ND				-							2E-10				ND	
P33-VP-9 (DUP)	VP-9 (DUP)	5		ND	ND				-							5E-10				ND	
P33-VP-10	VP-10	5		ND	ND				ND							ND				ND	
P33-VP-11	VP-11	5		ND	NA				-							ND				ND	
P33-VP-12	VP-12	5		ND	ND				-							ND				ND	

NONCARCINOGENIC

The Fehling Group, LLC

TABLE I-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P32-VP-1	VP-1	5		*ND*	*ND*				*ND*							**5E-10**				*ND*	
P32-VP-2	VP-2	5		*ND*	*ND*				*ND*							**1E-09**				*ND*	
P32-VP-3	VP-3	5		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VP-4	VP-4	5		*ND*	**8E-11**				*ND*							*ND*				*ND*	
P32-VP-5	VP-5	5	NONCARCINOGENIC	*ND*	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	**2E-10**	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC
P32-VP-6	VP-6	5		*ND*	*ND*				-							**5E-10**				*ND*	
P32-VP-7	VP-7	5		*ND*	*ND*				*ND*							**2E-10**				*ND*	
P32-VP-8	VP-8	5		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VP-9	VP-9	5		*ND*	*ND*				-							**9E-10**				*ND*	
P32-VP-10	VP-10	5		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VMW-1	VMW-1	10		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VMW-1 (DUP)	VMW-1 (DUP)	10		*ND*	*ND*				*ND*							*ND*				**2E-10**	
P32-VMW-1 (10')	VMW-1-10	10		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VWM-2	VMW-2	5		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VMW-2 (5')	VMW-2-5	5		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VWM-3	VWM-3	15		*ND*	*ND*				*ND*							**6E-11**				*ND*	
P32-VMW-3 (15')	VMW-3-15	15		*ND*	*ND*				*ND*							**3E-11**				*ND*	
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15		*ND*	*ND*				*ND*							**2E-11**				*ND*	
P32-VWM-4	VMW-4	10		*ND*	*ND*				*ND*							*ND*				*ND*	
P32-VMW-4 (10')	VWM-4-10	10		*ND*	*ND*				*ND*							*ND*				*ND*	

The Fehling Group, LLC

TABLE I-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
2A-1-5	-	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	*ND*	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	2E-08	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	2E-08
2A-1-10	-	10				*ND*		*ND*	*ND*				1E-10		*ND*			*ND*			1E-10
2A-1-15	-	15				*ND*		*ND*	*ND*				4E-11		*ND*			*ND*			4E-11
2A-2-5	-	5				4E-10		*ND*	*ND*				1E-08		*ND*			*ND*			1E-08
2A-2-5 (DUP)	-	5				*ND*		*ND*	*ND*				1E-08		*ND*			*ND*			1E-08
2A-2-10	-	10				*ND*		5E-13	*ND*				7E-11		*ND*			*ND*			7E-11
2A-2-15	-	15				*ND*		*ND*	*ND*				9E-11		*ND*			*ND*			9E-11
2A-3-5	-	5				*ND*		*ND*	*ND*				7E-10		*ND*			*ND*			7E-10
2A-3-10	-	10				*ND*		*ND*	*ND*				7E-12		*ND*			*ND*			7E-12
2A-3-15	-	15				*ND*		*ND*	*ND*				3E-12		*ND*			*ND*			3E-12
2A-AM	-	Ambient				*ND*		*ND*	*ND*				*ND*		*ND*			*ND*			0E+00
P33-VP-1	VP-1	5				3E-11		*ND*	*ND*				5E-10		1E-09			*ND*			2E-09
P33-VP-2	VP-2	5				2E-11		*ND*	*ND*				8E-10		*NA*			*ND*			1E-09
P33-VP-3	VP-3	5				3E-11		*ND*	*ND*				8E-10		NA			*ND*			1E-09
P33-VP-3 (DUP)	VP-3 (DUP)	5				3E-11		*ND*	*ND*				1E-09		1E-08			*ND*			1E-08
P33-VP-4	VP-4	5				6E-11		8E-12	4E-10				1E-10		5E-11			*ND*			8E-10
P33-VP-5	VP-5	5				5E-11		*ND*	*ND*				5E-10		2E-09			*ND*			3E-09
P33-VP-6	VP-6	5				3E-11		9E-12	*ND*				2E-10		2E-10			*ND*			7E-10
P33-VP-7	VP-7	5				5E-11		*ND*	*ND*				1E-09		*ND*			*ND*			1E-09
P32-VP-7 (DUP)	VP-7 (DUP)	5				5E-11		*ND*	7E-09				2E-10		*ND*			7E-10			8E-09
P33-VP-8	VP-8	5				5E-11		*ND*	*ND*				5E-10		*ND*			*ND*			1E-09
P33-VP-9	VP-9	5				5E-11		*ND*	*ND*				1E-09		5E-11			*ND*			1E-09
P33-VP-9 (DUP)	VP-9 (DUP)	5				5E-11		*ND*	*ND*				5E-10		5E-11			*ND*			1E-09
P33-VP-10	VP-10	5				*ND*		*ND*	*ND*				5E-11		*ND*			*ND*			5E-11
P33-VP-11	VP-11	5				3E-11		*ND*	*ND*				5E-10		*ND*			*ND*			6E-10
P33-VP-12	VP-12	5				3E-11		*ND*	*ND*				2E-09		*ND*			*ND*			2E-09

The Fehling Group, LLC

TABLE I-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
P32-VP-1	VP-1	5				2E-11		ND	ND				5E-10		ND			2E-09			3E-09
P32-VP-2	VP-2	5				2E-11		ND	1E-09				ND		ND			ND			2E-09
P32-VP-3	VP-3	5				ND		ND	ND				3E-10		ND			ND			3E-10
P32-VP-4	VP-4	5				2E-10		ND	4E-10				2E-10		ND			ND			7E-10
P32-VP-5	VP-5	5				3E-11		ND	ND				3E-10		ND			7E-10			1E-09
P32-VP-6	VP-6	5				3E-11		ND	5E-10				2E-10		ND			ND			1E-09
P32-VP-7	VP-7	5				ND		ND	ND				2E-10		ND			ND			5E-10
P32-VP-8	VP-8	5				ND		ND	2E-10				2E-10		ND			ND			4E-10
P32-VP-9	VP-9	5				8E-11		ND	7E-10				1E-10		ND			6E-10			2E-09
P32-VP-10	VP-10	5				3E-10		ND	4E-10				5E-11		ND			5E-10			1E-09
P32-VMW-1	VMW-1	10				ND		ND	ND				3E-12		ND			ND			3E-12
P32-VMW-1 (DUP)	VMW-1 (DUP)	10				ND		ND	ND				1E-10		ND			ND			3E-10
P32-VMW-1 (10')	VMW-1-10	10				ND		ND	ND				3E-12		ND			ND			3E-12
P32-VWM-2	VMW-2	5				ND		ND	ND				ND		ND			ND			0E+00
P32-VMW-2 (5')	VMW-2-5	5				ND		ND	ND				2E-10		ND			ND			2E-10
P32-VWM-3	VWM-3	15				5E-13		ND	ND				5E-12		1E-12			ND			7E-11
P32-VMW-3 (15')	VMW-3-15	15				2E-13		ND	ND				9E-13		ND			ND			3E-11
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15				2E-13		ND	ND				7E-13		ND			ND			2E-11
P32-VWM-4	VMW-4	10				ND		ND	ND				ND		ND			ND			0E+00
P32-VMW-4 (10')	VWM-4-10	10				ND		ND	ND				ND		ND			ND			0E+00

NONCARCINOGENIC

The Fehling Group, LLC

TABLE I-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
2A-1-5	-	5	4E-05	ND	ND	ND	ND	ND	NA	2E-06	ND	ND	ND	7E-07	NA	1E-03	3E-05	ND	ND	ND	ND
2A-1-10	-	10	2E-07	ND	ND	ND	ND	ND	NA	4E-08	ND	ND	ND	1E-08	NA	ND	1E-06	ND	ND	ND	ND
2A-1-15	-	15	1E-07	ND	ND	ND	ND	ND	NA	2E-08	ND	ND	ND	6E-09	NA	4E-06	1E-06	ND	ND	ND	ND
2A-2-5	-	5	1E-04	ND	ND	ND	ND	ND	NA	2E-06	ND	ND	ND	7E-07	NA	1E-03	ND	ND	ND	ND	ND
2A-2-5 (DUP)	-	5	9E-05	ND	ND	ND	ND	ND	NA	7E-06	ND	ND	ND	2E-06	NA	ND	3E-04	ND	ND	ND	ND
2A-2-10	-	10	8E-07	ND	ND	ND	ND	ND	NA	6E-08	ND	ND	ND	1E-08	NA	ND	2E-06	ND	ND	ND	ND
2A-2-15	-	15	2E-07	ND	ND	ND	ND	ND	NA	5E-09	ND	ND	ND	2E-09	NA	ND	ND	ND	ND	ND	ND
2A-3-5	-	5	9E-06	ND	ND	ND	ND	ND	NA	1E-06	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-10	-	10	1E-07	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-3-15	-	15	4E-08	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
2A-AM	-	Ambient	ND	ND	ND	ND	ND	ND	NA	2E-03	ND	ND	ND	4E-04	NA	ND	2E-02	ND	ND	ND	ND
P33-VP-1	VP-1	5	1E-05	ND	ND	4E-05	6E-06	1E-05	ND	2E-07	ND	ND	4E-07	2E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-2	VP-2	5	3E-05	ND	ND	2E-05	ND	1E-05	ND	5E-07	ND	ND	3E-07	4E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-3	VP-3	5	4E-05	1E-06	ND	3E-05	ND	1E-05	ND	2E-07	ND	ND	4E-07	2E-07	ND	2E-04	ND	ND	ND	1E-05	ND
P33-VP-3 (DUP)	VP-3 (DUP)	5	7E-05	2E-06	ND	3E-05	ND	1E-05	ND	1E-07	2E-05	ND	3E-07	2E-07	ND	ND	ND	ND	ND	2E-05	ND
P33-VP-4	VP-4	5	ND	ND	ND	2E-05	ND	9E-06	ND	2E-07	ND	ND	1E-07	4E-07	ND	2E-04	ND	2E-05	ND	ND	6E-06
P33-VP-5	VP-5	5	3E-05	1E-06	ND	3E-05	ND	1E-05	-	4E-07	ND	ND	4E-07	2E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-6	VP-6	5	1E-06	ND	ND	2E-05	ND	1E-05	ND	2E-07	ND	ND	1E-07	2E-07	ND	2E-04	ND	ND	ND	ND	2E-05
P33-VP-7	VP-7	5	2E-05	ND	ND	3E-05	6E-06	2E-05	-	2E-07	ND	9E-06	4E-07	2E-07	ND	2E-04	ND	ND	ND	ND	ND
P32-VP-7 (DUP)	VP-7 (DUP)	5	2E-06	ND	ND	1E-04	3E-05	ND	-	4E-07	ND	2E-05	ND	4E-07	ND	2E-04	7E-06	ND	ND	ND	5E-06
P33-VP-8	VP-8	5	8E-06	ND	ND	3E-05	6E-06	1E-05	-	2E-07	ND	4E-06	6E-07	2E-07	ND	2E-04	ND	ND	ND	1E-05	ND
P33-VP-9	VP-9	5	4E-06	ND	ND	4E-05	6E-06	1E-05	-	2E-07	ND	4E-06	4E-07	2E-07	ND	2E-04	ND	ND	ND	ND	ND
P33-VP-9 (DUP)	VP-9 (DUP)	5	4E-06	ND	ND	3E-05	6E-06	1E-05	-	2E-07	ND	4E-06	4E-07	2E-07	ND	4E-04	ND	ND	ND	ND	ND
P33-VP-10	VP-10	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4E-08	ND	ND	ND	ND	ND	ND	ND
P33-VP-11	VP-11	5	3E-06	ND	NA	3E-05	ND	1E-05	-	1E-07	ND	ND	6E-07	2E-07	ND	ND	ND	ND	ND	ND	ND
P33-VP-12	VP-12	5	1E-06	ND	ND	2E-05	ND	1E-05	-	1E-07	ND	ND	3E-07	2E-07	ND	ND	ND	ND	ND	ND	ND

The Fehling Group, LLC

TABLE I-7d

Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P32-VP-1	VP-1	5	2E-06	ND	ND	ND	ND	ND	ND	1E-06	ND	ND	ND	9E-07	1E-05	4E-04	1E-06	ND	ND	ND	ND
P32-VP-2	VP-2	5	ND	ND	ND	1E-05	ND	ND	ND	1E-07	ND	ND	ND	2E-07	ND	1E-03	ND	ND	ND	ND	5E-06
P32-VP-3	VP-3	5	3E-06	ND	ND	ND	ND	ND	ND	4E-07	ND	ND	ND	4E-07	ND	ND	3E-06	ND	ND	ND	ND
P32-VP-4	VP-4	5	2E-06	ND	4E-04	5E-05	2E-05	ND	ND	1E-07	ND	9E-06	ND	4E-07	ND	ND	ND	ND	ND	ND	5E-06
P32-VP-5	VP-5	5	2E-06	ND	ND	6E-06	ND	ND	ND	6E-07	ND	ND	ND	7E-07	ND	2E-04	1E-06	ND	ND	ND	ND
P32-VP-6	VP-6	5	1E-06	ND	ND	6E-05	2E-05	ND	-	1E-07	ND	9E-06	ND	2E-07	ND	4E-04	ND	ND	ND	ND	ND
P32-VP-7	VP-7	5	2E-06	ND	ND	ND	ND	ND	ND	4E-07	ND	ND	ND	4E-07	ND	2E-04	7E-06	ND	ND	ND	ND
P32-VP-8	VP-8	5	3E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-07	ND	ND	ND	ND	ND	ND	ND
P32-VP-9	VP-9	5	1E-06	ND	ND	1E-04	4E-05	ND	-	8E-07	ND	2E-05	ND	7E-07	1E-05	8E-04	2E-06	ND	ND	ND	6E-06
P32-VP-10	VP-10	5	ND	ND	ND	3E-05	ND	ND	ND	5E-07	ND	4E-06	ND	4E-07	ND	ND	ND	ND	ND	ND	7E-06
P32-VMW-1	VMW-1	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-08	ND	ND	ND	ND	ND	ND	ND
P32-VMW-1 (DUP)	VMW-1 (DUP)	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-08	ND	ND	ND	ND	ND	5E-06	ND
P32-VMW-1 (10')	VMW-1-10	10	2E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-09	ND	ND	ND	ND	ND	ND	ND
P32-VWM-2	VMW-2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1E-06	ND	ND	ND	ND	ND	ND	ND
P32-VMW-2 (5')	VMW-2-5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2E-07	ND	ND	ND	ND	ND	ND	ND
P32-VWM-3	VWM-3	15	ND	ND	ND	ND	ND	ND	ND	5E-09	ND	ND	ND	2E-08	6E-07	5E-05	4E-08	ND	ND	ND	ND
P32-VMW-3 (15')	VMW-3-15	15	1E-08	ND	ND	ND	ND	3E-08	ND	3E-09	ND	ND	ND	9E-09	ND	2E-05	8E-08	ND	1E-09	ND	1E-07
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15	1E-08	ND	ND	ND	ND	5E-08	ND	3E-09	ND	ND	ND	9E-09	3E-07	1E-05	8E-08	ND	1E-09	ND	1E-07
P32-VWM-4	VMW-4	10	ND	ND	ND	ND	ND	ND	ND	6E-09	ND	ND	ND	4E-08	ND	ND	5E-08	ND	ND	ND	ND
P32-VMW-4 (10')	VWM-4-10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6E-09	ND	ND	ND	ND	ND	ND	ND

The Fehling Group, LLC

TABLE I-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
2A-1-5	-	5	NA	ND	NA	ND	4E-05	ND	ND	NA	ND	NA	7E-03	5E-05	ND	ND	ND	ND	NA	NA	8E-03
2A-1-10	-	10	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	4E-05	1E-07	ND	ND	ND	ND	NA	NA	4E-05
2A-1-15	-	15	NA	ND	NA	ND	ND	ND	ND	NA	3E-07	NA	1E-05	8E-08	ND	ND	ND	ND	NA	NA	2E-05
2A-2-5	-	5	NA	ND	NA	1E-05	3E-04	ND	ND	NA	2E-04	NA	3E-03	3E-05	ND	ND	ND	ND	NA	NA	5E-03
2A-2-5 (DUP)	-	5	NA	ND	NA	ND	8E-05	ND	ND	NA	4E-05	NA	3E-03	2E-05	ND	ND	ND	ND	NA	NA	4E-03
2A-2-10	-	10	NA	ND	NA	ND	5E-07	1E-07	ND	NA	3E-07	NA	2E-05	1E-07	ND	ND	ND	ND	NA	NA	3E-05
2A-2-15	-	15	NA	ND	NA	ND	2E-07	ND	ND	NA	ND	NA	3E-05	2E-07	ND	ND	ND	ND	NA	NA	3E-05
2A-3-5	-	5	NA	ND	NA	ND	ND	ND	ND	NA	4E-05	NA	2E-04	ND	ND	9E-06	ND	ND	NA	NA	3E-04
2A-3-10	-	10	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	2E-06	ND	ND	9E-08	ND	ND	NA	NA	2E-06
2A-3-15	-	15	NA	ND	NA	ND	2E-07	ND	ND	NA	ND	NA	9E-07	6E-08	ND	3E-08	ND	ND	NA	NA	1E-06
2A-AM	-	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA	2E-02
P33-VP-1	VP-1	5	2E-07	2E-05	-	9E-07	9E-05	ND	ND	ND	1E-05	4E-07	2E-04	5E-05	9E-03	2E-06	3E-06	ND	2E-04	7E-02	8E-02
P33-VP-2	VP-2	5	2E-07	ND	-	4E-07	4E-05	ND	ND	ND	9E-06	ND	2E-04	2E-05	NA	1E-06	3E-06	ND	1E-04	4E-02	4E-02
P33-VP-3	VP-3	5	9E-08	1E-05	-	9E-07	9E-05	ND	ND	ND	1E-05	ND	2E-04	3E-05	NA	3E-07	ND	ND	NA	4E-02	4E-02
P33-VP-3 (DUP)	VP-3 (DUP)	5	9E-08	1E-05	-	9E-07	4E-05	ND	ND	ND	1E-05	ND	3E-04	2E-05	9E-02	7E-07	3E-06	ND	4E-04	6E-02	2E-01
P33-VP-4	VP-4	5	9E-08	ND	-	2E-06	1E-04	2E-06	3E-04	ND	2E-05	ND	3E-05	1E-04	4E-04	ND	ND	ND	4E-03	5E-02	6E-02
P33-VP-5	VP-5	5	9E-08	5E-06	-	1E-06	9E-05	ND	ND	ND	2E-05	ND	2E-04	7E-05	2E-02	7E-07	5E-06	ND	5E-04	7E-02	9E-02
P33-VP-6	VP-6	5	9E-08	ND	-	9E-07	4E-05	2E-06	ND	ND	9E-06	ND	5E-05	5E-05	2E-03	ND	ND	ND	1E-03	3E-02	4E-02
P33-VP-7	VP-7	5	9E-08	1E-05	-	1E-06	9E-05	ND	ND	ND	2E-05	ND	3E-04	3E-05	ND	7E-07	ND	ND	2E-04	4E-02	4E-02
P32-VP-7 (DUP)	VP-7 (DUP)	5	ND	1E-05	-	1E-06	1E-04	ND	5E-03	8E-07	3E-05	4E-06	7E-05	7E-06	ND	7E-06	5E-06	7E-06	6E-04	4E-02	5E-02
P33-VP-8	VP-8	5	2E-07	4E-05	-	1E-06	9E-05	ND	ND	ND	2E-05	ND	2E-04	2E-05	ND	7E-07	8E-06	ND	3E-04	4E-02	4E-02
P33-VP-9	VP-9	5	9E-08	1E-05	-	1E-06	9E-05	ND	ND	ND	2E-05	ND	3E-04	7E-05	4E-04	3E-07	5E-06	ND	3E-04	4E-02	4E-02
P33-VP-9 (DUP)	VP-9 (DUP)	5	2E-07	1E-05	-	1E-06	9E-05	ND	ND	ND	2E-05	ND	2E-04	3E-05	4E-04	ND	5E-06	ND	4E-04	5E-02	5E-02
P33-VP-10	VP-10	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	2E-05	3E-06	ND	ND	ND	ND	NA	5E-02	5E-02
P33-VP-11	VP-11	5	9E-08	ND	-	9E-07	9E-05	ND	ND	ND	1E-05	ND	2E-04	2E-05	ND	ND	2E-06	ND	1E-04	8E-02	8E-02
P33-VP-12	VP-12	5	9E-08	ND	-	9E-07	4E-05	ND	ND	ND	1E-05	ND	6E-04	2E-05	ND	7E-07	ND	ND	1E-04	6E-02	6E-02

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TABLE I-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
P32-VP-1	VP-1	5	*ND*	2E-05	-	4E-07	4E-05	*ND*	*ND*	*ND*	9E-06	*ND*	2E-04	3E-06	*ND*	3E-06	3E-06	2E-05	7E-04	4E-02	4E-02
P32-VP-2	VP-2	5	*ND*	*ND*	-	4E-07	4E-05	*ND*	8E-04	*ND*	9E-06	*ND*	*ND*	2E-05	*ND*	*ND*	*ND*	*ND*	7E-03	6E-02	7E-02
P32-VP-3	VP-3	5	*ND*	1E-05	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	8E-05	2E-06	*ND*	1E-06	*ND*	*ND*	4E-03	8E-02	8E-02
P32-VP-4	VP-4	5	*ND*	5E-06	-	4E-06	5E-04	*ND*	3E-04	*ND*	9E-05	*ND*	5E-05	5E-04	*ND*	3E-07	*ND*	*ND*	3E-03	2E-01	2E-01
P32-VP-5	VP-5	5	*ND*	3E-05	-	9E-07	4E-05	*ND*	*ND*	*ND*	9E-06	*ND*	8E-05	7E-06	*ND*	1E-05	*ND*	7E-06	8E-03	1E-01	1E-01
P32-VP-6	VP-6	5	*ND*	1E-05	-	9E-07	9E-05	*ND*	4E-04	*ND*	2E-05	1E-06	6E-05	1E-05	*ND*	1E-05	*ND*	*ND*	2E-04	5E-02	5E-02
P32-VP-7	VP-7	5	8E-08	1E-05	-	*ND*	3E-05	*ND*	*ND*	*ND*	4E-06	*ND*	7E-05	3E-06	*ND*	7E-06	*ND*	*ND*	2E-04	5E-02	5E-02
P32-VP-8	VP-8	5	*ND*	1E-05	-	*ND*	*ND*	*ND*	1E-04	*ND*	*ND*	*ND*	6E-05	*ND*	*ND*	1E-06	*ND*	*ND*	1E-04	4E-02	4E-02
P32-VP-9	VP-9	5	9E-08	1E-05	-	2E-06	3E-04	*ND*	5E-04	*ND*	9E-05	8E-07	4E-05	5E-05	*ND*	3E-06	3E-06	6E-06	2E-03	5E-02	5E-02
P32-VP-10	VP-10	5	*ND*	1E-05	-	9E-06	7E-04	*ND*	3E-04	*ND*	1E-04	*ND*	2E-05	3E-04	*ND*	7E-07	*ND*	5E-06	1E-03	8E-02	8E-02
P32-VMW-1	VMW-1	10	*ND*	4E-07	-	*ND*	8E-07	*ND*	*ND*	*ND*	*ND*	*ND*	8E-07	8E-07	*ND*	7E-08	*ND*	*ND*	3E-07	5E-05	6E-05
P32-VMW-1 (DUP)	VMW-1 (DUP)	10	*ND*	4E-07	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	4E-05	6E-07	*ND*	7E-08	*ND*	*ND*	3E-07	1E-04	2E-04
P32-VMW-1 (10')	VMW-1-10	10	*ND*	4E-07	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	8E-07	1E-06	*ND*	7E-08	*ND*	*ND*	2E-04	*ND*	2E-04
P32-VWM-2	VMW-2	5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	7E-05	*ND*	3E-06	*ND*	*ND*	2E-05	7E-03	8E-03
P32-VMW-2 (5')	VMW-2-5	5	*ND*	2E-05	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	7E-05	1E-04	*ND*	7E-06	*ND*	*ND*	1E-02	*ND*	1E-02
P32-VWM-3	VWM-3	15	1E-09	*ND*	-	1E-08	7E-07	*ND*	*ND*	*ND*	9E-08	*ND*	2E-06	6E-07	9E-06	*ND*	*ND*	*ND*	3E-07	1E-04	2E-04
P32-VMW-3 (15')	VMW-3-15	15	*ND*	8E-08	-	5E-09	2E-07	*ND*	*ND*	*ND*	*ND*	*ND*	3E-07	5E-07	*ND*	1E-08	*ND*	*ND*	3E-05	3E-05	8E-05
P32-VMW-3 (15') (DUP)	VMW-3-15 (DUP)	15	*ND*	8E-08	-	5E-09	3E-07	*ND*	*ND*	*ND*	*ND*	*ND*	2E-07	1E-06	*ND*	1E-08	*ND*	*ND*	2E-04	6E-05	2E-04
P32-VWM-4	VMW-4	10	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	5E-07	*ND*	3E-08	*ND*	*ND*	2E-07	7E-05	7E-05
P32-VWM-4 (10')	VWM-4-10	10	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	1E-06	*ND*	3E-08	*ND*	*ND*	2E-04	7E-05	2E-04

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ATTACHMENT J

Tables for PARC Area 5

TABLE J-1

Soil Summary for PARC Area 5 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
5-1	5-1-0.5	05/15/2017	0.5	*ND*	1.5	72	*ND*	*ND*	7.9	-	5.6	12	20	*ND*	*ND*	6.6	*ND*	*ND*	*ND*	21	46
	5-1-1.0	05/15/2017	1.0	*ND*	2.1	84	*ND*	*ND*	10	-	5.3	19	68	*ND*	*ND*	7.6	*ND*	*ND*	*ND*	22	99
	5-1-2.0	05/15/2017	2.0	*ND*	4.7	42	*ND*	*ND*	6.0	-	4.9	23	110	0.11	*ND*	7.0	*ND*	*ND*	*ND*	18	130
	5-1-3.0	05/15/2017	3.0	*ND*	*ND*	30	*ND*	*ND*	4.2	-	3.2	3.8	2.2	0.14	*ND*	2.7	*ND*	*ND*	*ND*	14	16
5-2	5-2-0.5	05/15/2017	0.5	*ND*	4.1	75	*ND*	*ND*	15	-	8.5	20	48	*ND*	*ND*	14	*ND*	*ND*	*ND*	29	60
	5-2-1.0	05/15/2017	1.0	*ND*	*ND*	52	*ND*	*ND*	5.9	-	4.5	9.6	19	*ND*	*ND*	5.0	*ND*	*ND*	*ND*	18	77
	5-2-2.0	05/15/2017	2.0	*ND*	*ND*	57	*ND*	*ND*	6.1	-	4.8	5.9	2.3	*ND*	*ND*	4.5	*ND*	*ND*	*ND*	17	23
	5-2-3.0	05/15/2017	3.0	*ND*	1.1	21	*ND*	*ND*	3.2	-	3.2	4.3	180	0.12	*ND*	4.0	*ND*	*ND*	*ND*	8.5	10
L-9	L-9 @ 1'	02/12/2016	1.0	2.3	3.4	72	*ND*	*ND*	7.9	-	4.4	20	64	*ND*	*ND*	7.3	*ND*	*ND*	*ND*	24	75
	L-9 @ 2.5'	02/12/2016	2.5	*ND*	2.2	44	*ND*	*ND*	6.3	-	2.9	7.0	16	*ND*	*ND*	4.3	*ND*	*ND*	*ND*	24	27
L-10	L-10 @ 1'	02/12/2016	1.0	*ND*	5.0	120	*ND*	*ND*	10	-	5.0	19	44	0.25	1.1	9.2	*ND*	*ND*	*ND*	23	68
	L-10 @ 3'	02/12/2016	3.0	*ND*	2.8	58	*ND*	*ND*	8.1	-	3.6	10	20	*ND*	*ND*	6.0	*ND*	*ND*	*ND*	22	47
# of non-detects =>				**11**	**3**	**0**	**12**	**12**	**0**	**0**	**0**	**0**	**0**	**8**	**11**	**0**	**12**	**12**	**12**	**0**	**0**
# of detects =>				**1**	**9**	**12**	**0**	**0**	**12**	**0**	**12**	**12**	**12**	**4**	**1**	**12**	**0**	**0**	**0**	**12**	**12**
# of samples =>				**12**	**12**	**12**	**12**	**12**	**12**	**0**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
frequency of detection =>				**8%**	**75%**	**100%**	**0%**	**0%**	**100%**	**-**	**100%**	**100%**	**100%**	**33%**	**8%**	**100%**	**0%**	**0%**	**0%**	**100%**	**100%**
minimum detected =>				**2.3**	**1.1**	**21**	**-**	**-**	**3.2**	**-**	**2.9**	**3.8**	**2.2**	**0.11**	**1.1**	**2.7**	**-**	**-**	**-**	**8.5**	**10**
maximum detected =>				**2.3**	**5**	**120**	**-**	**-**	**15**	**-**	**8.5**	**23**	**180**	**0.25**	**1.1**	**14**	**-**	**-**	**-**	**29**	**130**

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TABLE J-2

Soil Summary for PARC Area 5 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
5-1	5-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	5-1-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	5-1-2.0	05/15/2017	2.0	-	-	-	-	-	-	-	-	-
	5-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
5-2	5-2-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	5-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	5-2-2.0	05/15/2017	2.0	-	-	-	-	-	-	-	-	-
	5-2-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
L-9	L-9 @ 1'	02/12/2016	1.0	*ND*	**190**	-	*ND*	*ND*	-	-	-	*ND*
	L-9 @ 2.5'	02/12/2016	2.5	-	-	-	*ND*	-	-	-	-	-
L-10	L-10 @ 1'	02/12/2016	1.0	*ND*	**260**	-	*ND*	*ND*	-	-	-	*ND*
	L-10 @ 3'	02/12/2016	3.0	-	-	-	*ND*	-	-	-	-	-
			# of non-detects =>	**2**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**2**
			# of detects =>	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
			# of samples =>	**2**	**2**	**0**	**4**	**2**	**0**	**0**	**0**	**2**
			frequency of detection =>	**0%**	**100%**	**-**	**0%**	**0%**	**-**	**-**	**-**	**0%**
			minimum detected =>	**-**	**190**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
			maximum detected =>	**-**	**260**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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TABLE J-3
Soil EPCs (0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Concentrations in Soil (wet weight basis, mg/kg)*			Concentrations in Soil (dry weight basis, mg/kg)**		
				Lead	Zinc	TPH-DRO	Lead	Zinc	TPH-DRO
5-1	5-1-0.5	05/15/2017	0.5	20	46	-	21	49	-
	5-1-1.0	05/15/2017	1.0	68	99	-	72	105	-
	5-1-2.0	05/15/2017	2.0	110	130	-	116	137	-
	5-1-3.0	05/15/2017	3.0	2.2	16	-	2	17	-
5-2	5-2-0.5	05/15/2017	0.5	48	60	-	51	63	-
	5-2-1.0	05/15/2017	1.0	19	77	-	20	81	-
	5-2-2.0	05/15/2017	2.0	2.3	23	-	2	24	-
	5-2-3.0	05/15/2017	3.0	180	10	-	190	11	-
L-9	L-9 @ 1'	02/12/2016	1.0	64	75	190	68	79	201
	L-9 @ 2.5'	02/12/2016	2.5	16	27	-	17	29	-
L-10	L-10 @ 1'	02/12/2016	1.0	44	68	260	47	72	275
	L-10 @ 3'	02/12/2016	3.0	20	47	-	21	50	-
			95% UCL for 0 to 10 ft bgs (see Attachment O)* =>				81	79	275

* 95% UCL not calculated due to low number of samples; value shown is maximum value

* Italicized value is the reporting limit for 'non-detect' ('ND') result.

** Dry weight concentration = Wet weight concentration x (1 + average moisture content)
where average moisture content = 0.056 g/g (see **Table 1**).

The Fehling Group, LLC

TABLE J-4
Soil Risk Characterization Summary
~ PARC Area 5 ~

		Soil RBC (mg/kg)*				Risk Values (Incremental Lifetime Cancer Risk [ILCR] and Hazard Quotient [HQ])			
		Residential Receptor		Construction Worker Receptor		Residential Receptor		Construction Worker Receptor	
Soil COPC	**Soil EPC (mg/kg, dry weight basis)**	**Cancer Endpoint**	**Noncancer Endpoint**	**Cancer Endpoint**	**Noncancer Endpoint**	**ILCR (unitless)**	**HQ (unitless)**	**ILCR (unitless)**	**HQ (unitless)**
Lead	81	Not applicable (see Section 3.2.1.2)							
Zinc	79	--	2.30E+04	--	1.06E+05	--	3.4E-03	--	7.5E-04
TPH-DRO	275	--	9.60E+01	--	8.85E+02	--	2.9E+00	--	3.1E-01
		Cumulative Risk Values (ILCR and HI Values) =>				**0.0E+00**	**2.9E+00**	**0.0E+00**	**3.1E-01**

* "Combined" value listed in **Table 5** for the residential receptor and **Table 6** for the construction worker receptor.

The Fehling Group, LLC

ATTACHMENT K

Tables for PARC Area 6

TABLE K-1

Soil Summary for PARC Area 6 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
6-1	6-1-0.5	05/15/2017	0.5	ND	1.5	69	ND	ND	6.0	-	3.3	7.2	11	0.140	ND	4.3	ND	ND	ND	14	28
	6-1-1.0	05/15/2017	1.0	ND	1.4	77	ND	ND	6.2	-	3.7	8.5	13	ND	ND	6.7	ND	ND	ND	15	33
	6-1-3.0	05/15/2017	3.0	ND	ND	70	ND	ND	8.2	-	6.6	7.4	3.3	ND	ND	6.1	ND	ND	ND	23	32
	6-1-5.0	05/15/2017	5.0	ND	ND	66	ND	ND	8.1	-	6.3	6.5	1.2	ND	ND	5.6	ND	ND	ND	24	28
6-2	6-2-0.5	05/16/2017	0.5	ND	2.9	110	ND	ND	5.5	-	2.7	6.8	90	0.330	ND	3.2	ND	ND	ND	15	62
	6-2-1.0	05/16/2017	1.0	ND	1.2	87	ND	ND	8.2	-	5.7	15	38	0.780	ND	8.0	ND	ND	ND	26	89
	6-2-3.0	05/16/2017	3.0	ND	ND	29	ND	ND	3.7	-	2.6	2.5	1.2	ND	ND	2.4	ND	ND	ND	11	13
	6-2-5.0	05/16/2017	5.0	ND	ND	34	ND	ND	2.9	-	2.8	3.0	1.2	ND	ND	2.4	ND	ND	ND	10	14
6-3	6-3-0.5	05/15/2017	0.5	ND	ND	46	ND	ND	5.8	-	3.5	5.7	9.1	ND	ND	3.5	ND	ND	ND	14	28
	6-3-1.0	05/15/2017	1.0	8.3	11	1900	ND	12	69	3.0	9.2	250	4300	0.440	ND	31	1.0	ND	ND	22	10000
	6-3-3.0	05/15/2017	3.0	ND	1.6	160	ND	ND	8.7	-	3.5	21	250	ND	ND	5.0	ND	ND	ND	11	660
	6-3-5.0	05/15/2017	5.0	ND	ND	21	ND	ND	3.1	-	2.3	2.4	1.1	0.400	ND	1.9	ND	ND	ND	12	13
6-4	6-4-0.5	05/15/2017	0.5	ND	2.3	95	ND	ND	6.2	-	3.2	13	30	0.170	ND	5.6	ND	ND	ND	15	55
	6-4-1.0	05/15/2017	1.0	ND	26	71	ND	1.2	11	-	4.6	41	94	ND	ND	8.4	ND	ND	ND	19	960
	6-4-3.0	05/15/2017	3.0	ND	11	41	ND	ND	6.3	-	4.2	7.1	16	ND	ND	3.8	ND	ND	ND	18	32
	6-4-5.0	05/15/2017	5.0	ND	9.0	69	ND	ND	11	-	7.5	11	3.2	ND	ND	7.0	ND	ND	ND	29	59
6-5	6-5-0.5	05/15/2017	0.5	4.0	9.1	95	ND	2.3	19	5.0	7.6	82	400	0.170	ND	12	ND	ND	ND	21	950
	6-5-1.0	05/15/2017	1.0	ND	3.9	75	ND	ND	10	-	6.7	13	59	ND	ND	6.9	ND	ND	ND	27	83
	6-5-3.0	05/15/2017	3.0	ND	1.0	31	ND	ND	4.5	-	3.2	3.8	2.4	0.110	ND	2.8	ND	ND	ND	14	17
	6-5-5.0	05/15/2017	5.0	ND	ND	22	ND	ND	3.3	-	2.3	2.5	1.1	1.5	ND	2.0	ND	ND	ND	9.2	13
6-6	6-6-1.0	05/15/2017	1.0	ND	1.1	120	ND	ND	15	-	8.3	13	12	0.120	ND	12	ND	ND	ND	34	45
	6-6-3.0	05/15/2017	3.0	ND	ND	30	ND	ND	3.3	-	2.6	3.0	1.2	ND	ND	2.5	ND	ND	ND	10	13
	6-6-5.0	05/15/2017	5.0	ND	ND	52	ND	ND	4.3	-	3.0	4.0	1.1	ND	ND	3.0	ND	ND	ND	14	14
	6-6-7.5	05/15/2017	7.5	ND	ND	32	ND	ND	7.5	-	3.8	4.1	1.2	ND	ND	3.8	ND	ND	ND	21	17
6-7	6-7-1.0	05/15/2017	1.0	ND	ND	55	ND	ND	7.5	-	5.3	6.1	3.0	ND	ND	5.4	ND	ND	ND	22	26
	6-7-3.0	05/15/2017	3.0	ND	ND	25	ND	ND	3.7	-	2.7	3.2	2.0	0.120	ND	2.3	ND	ND	ND	12	14
	6-7-5.0	05/15/2017	5.0	ND	ND	24	ND	ND	4.3	-	2.3	3.6	7.5	ND	ND	2.8	ND	ND	ND	12	29
	6-7-7.5	05/15/2017	7.5	ND	ND	62	ND	ND	8.6	-	6.0	7.1	4.3	ND	ND	5.6	ND	ND	ND	25	33

The Fehling Group, LLC

TABLE K-1

Soil Summary for PARC Area 6 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
6-8	6-8-1.0	05/15/2017	1.0	ND	5.0	100	ND	ND	7.5	-	4.5	97	140	0.100	ND	6.1	ND	ND	ND	21	210
	6-8-3.0	05/15/2017	3.0	ND	ND	25	ND	ND	3.9	-	2.7	3.0	1.0	ND	ND	2.4	ND	ND	ND	15	13
	6-8-5.0	05/15/2017	5.0	ND	ND	47	ND	ND	6.3	-	4.8	4.3	1.4	ND	ND	4.0	ND	ND	ND	23	21
	6-8-7.5	05/15/2017	7.5	ND	ND	17	ND	ND	1.7	-	1.8	ND	ND	4.6	ND	1.3	ND	ND	ND	7.2	10
6-9	6-9-1.0	05/15/2017	1.0	ND	ND	79	ND	ND	10	-	6.4	17	33	0.190	ND	9.1	ND	ND	ND	32	61
	6-9-3.0	05/15/2017	3.0	47	9.4	110	ND	1.1	10	-	4.6	390	3100	1.4	ND	12	ND	1.7	ND	18	510
	6-9-5.0	05/15/2017	5.0	ND	ND	81	ND	ND	8.1	-	5.5	41	41	0.200	ND	8.7	ND	ND	ND	23	56
	6-9-7.5	05/15/2017	7.5	ND	ND	78	ND	ND	10	-	7.7	8.8	3.4	0.200	ND	7.0	ND	ND	ND	29	36
6-10	6-10-1.0	05/15/2017	1.0	ND	ND	110	ND	ND	11	-	6.8	24	99	0.290	ND	7.5	ND	ND	ND	27	92
	6-10-3.0	05/15/2017	3.0	5.5	6.5	380	ND	1.8	15	-	3.2	160	800	0.190	ND	9.4	ND	ND	ND	14	2100
	6-10-5.0	05/15/2017	5.0	ND	8.6	57	ND	ND	9.0	-	3.5	37	13	ND	ND	5.0	ND	ND	ND	17	31
	6-10-7.5	05/15/2017	7.5	ND	ND	38	ND	ND	4.8	-	3.6	3.2	1.2	ND	ND	3.2	ND	ND	ND	16	17
16-5	16-5 @ 1'	02/12/2016	1.0	ND	2.0	56	ND	ND	6.6	-	3.5	8.4	19	ND	ND	4.7	ND	ND	ND	20	40
	16-5 @ 3'	02/12/2016	3.0	ND	2.1	55	ND	ND	7.1	-	3.5	9.4	19	0.150	ND	5.1	ND	ND	ND	21	39
	16-5 @ 4'	02/12/2016	4.0	ND	2.3	59	ND	ND	8.4	-	3.7	8.8	21	ND	ND	5.6	ND	ND	ND	23	42
16-6	16-6 @ 1'	02/1/2016	1.0	ND	2.4	55	ND	ND	6.3	-	3.5	8.0	11	0.100	ND	4.8	ND	ND	ND	21	36
	16-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-7	16-7 @ 1'	02/1/2016	1.0	ND	1.9	78	ND	ND	10	-	5.1	14	6.1	0.120	ND	8.2	ND	ND	ND	25	38
	16-7 @ 3'	02/1/2016	3.0	ND	1.6	55	ND	ND	6.8	-	4.0	7.3	4.3	ND	ND	5.2	ND	ND	ND	20	26
	16-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-5	L-5 @ 1'	02/1/2016	1.0	ND	1.8	46	ND	ND	5.5	-	3.2	8.4	25	ND	ND	4.2	ND	ND	ND	17	32
	L-5 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5 @ 4.5'	02/1/2016	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-5	L-5 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5 @ 2'	02/26/2016	2.0	ND	ND	46	ND	ND	5.6	-	3.2	6.9	2.7	ND	ND	3.9	ND	ND	ND	18	23
	L-5 @ 3'	02/26/2016	3.0	ND	ND	30	ND	ND	3.9	-	2.2	2.8	ND	ND	ND	2.5	ND	ND	ND	14	14
L-6	L-6 @ 1'	02/1/2016	1.0	ND	10	130	ND	ND	15	-	5.1	64	200	0.150	ND	12	ND	ND	ND	26	310
	L-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-6 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The Fehling Group, LLC

TABLE K-1

Soil Summary for PARC Area 6 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
L-6	L-6 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-6 @ 2'	02/26/2016	2.0	ND	26	93	ND	ND	10	-	6.0	10	5.8	ND	ND	7.4	ND	ND	ND	28	53
	L-6 @ 3'	02/26/2016	3.0	ND	17	48	ND	ND	5.5	-	3.3	5.0	2.4	ND	ND	3.8	ND	ND	ND	17	24
18.1-GP-1	GP-1 @ 1'	04/1/2016	1.0	ND	1.9	73	ND	ND	11	-	4.5	19	53	0.550	ND	12	ND	ND	ND	19	85
	GP-1 @ 2'	04/1/2016	2.0	ND	2.4	160	ND	1.6	10	-	4.3	23	74	0.750	ND	8.9	ND	ND	ND	22	230
	GP-1 @ 3.5'	04/1/2016	3.5	ND	1.8	70	ND	ND	8.0	-	3.8	15	34	0.120	ND	7.6	ND	ND	ND	22	62
	GP-1 @ 5'	04/1/2016	5.0	ND	1.0	41	ND	ND	5.5	-	3.0	4.7	1.6	ND	ND	3.9	ND	ND	ND	18	20
	GP-1 @ 6.5'	04/1/2016	6.5	7.3	2.2	100	ND	ND	8.8	-	3.5	44	170	1.1	ND	15	ND	ND	ND	19	290
18.1-GP-2	GP-2 @ 1'	04/1/2016	1.0	ND	1.9	69	ND	ND	6.8	-	3.4	12	44	1.3	ND	5.5	ND	ND	ND	19	100
	GP-2 @ 2'	04/1/2016	2.0	ND	ND	2100	ND	ND	38	-	ND	1400	8300	0.670	ND	47	ND	ND	ND	29	8300
	GP-2 @ 3.5'	04/1/2016	3.5	ND	2.0	65	ND	ND	8.3	-	3.8	23	71	0.350	ND	7.6	ND	ND	ND	21	70
	GP-2 @ 5'	04/1/2016	5.0	ND	ND	49	ND	ND	6.2	-	3.6	7.1	1.5	ND	ND	4.2	ND	ND	ND	22	24
18.1-GP-3	GP-3 @ 2'	04/1/2016	2.0	ND	3.3	67	ND	ND	6.4	-	3.4	18	62	0.110	ND	6.1	ND	ND	ND	19	92
	GP-3 @ 3.5'	04/1/2016	3.5	ND	1.2	42	ND	ND	5.8	-	3.1	5.4	1.4	ND	ND	3.7	ND	ND	ND	20	20
	GP-3 @ 5'	04/1/2016	5.0	ND	ND	44	ND	ND	4.6	-	2.8	4.4	1.5	ND	ND	3.2	ND	ND	ND	16	19
18.1-1	18.1-1-1	10/22/2015	1.0	ND	2.0	98	ND	1.8	10	-	6.3	24	61	0.182	0.8	14	ND	ND	ND	20	112
	18.1-1-3.5	10/22/2015	3.5	ND	ND	64	ND	1.0	6.8	-	6.3	8.0	4.7	ND	ND	6.1	ND	ND	ND	19	35
18.1-2	18.1-2-1	10/22/2015	1.0	ND	ND	146	ND	1.1	7.7	-	4.5	12	25	0.108	0.4	8.6	0.870	ND	ND	17	61
	18.1-2-2.0	10/22/2015	2.0	ND	0.82	134	ND	1.4	12	-	5.8	95	293	0.180	0.4	48	ND	ND	ND	19	288
18.1-3	18.1-3-1	10/22/2015	1.0	ND	ND	73	0.286	1.4	10	-	8.7	12	3.5	0.103	0.3	22	ND	ND	ND	21	40
	18.1-3-3.5	10/22/2015	3.5	ND	1.7	202	0.277	2.8	15	-	7.4	64	554	0.862	0.3	19	ND	0.297	ND	27	545
18.1-4	18.1-4-1	10/22/2015	1.0	ND	8.5	443	ND	4.0	28	-	10	312	1010	1.2	ND	40	ND	0.258	ND	42	1400
	18.1-4-3.5	12/9/2015	3.5	ND	3.6	73	ND	0.785	7.9	-	6.8	13	17	ND	ND	7.0	1.0	ND	ND	22	69
18.1-4A	18.1-4A-1	12/9/2015	1.0	452	10.0	486	0.269	5.4	22	-	7.9	531	13900	0.468	ND	22	1.2	13	ND	31	2140
	18.1-4A-3.5	12/9/2015	3.5	ND	4.6	99	ND	0.906	10	-	8.5	18	30	ND	ND	9.3	2.1	ND	ND	27	69
18.1-4B	18.1-4B-1	12/9/2015	1.0	5.1	14	444	0.280	2.7	25	-	9.1	475	1690	0.341	ND	18	1.2	0.710	ND	31	1500
	18.1-4B-3.5	12/9/2015	3.5	ND	3.0	65	ND	0.679	7.1	-	6.0	6.0	2.9	ND	ND	5.9	1.7	ND	ND	22	37
18.1-4C	18.1-4C-1	12/9/2015	1.0	9.5	13	727	0.283	3.2	35	-	8.6	552	1930	0.439	ND	18	1.7	0.547	ND	27	1990
	18.1-4C-3.5	12/9/2015	3.5	ND	3.6	71	ND	0.764	7.3	-	6.5	6.7	8.8	ND	ND	6.7	10	ND	ND	22	56

The Fehling Group, LLC

TABLE K-1

Soil Summary for PARC Area 6 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
18.1-4D	18.1-4D-1	12/9/2015	1.0	*ND*	11	474	0.315	2.9	31	-	8.7	308	1170	0.456	*ND*	25	1.4	0.434	*ND*	30	1550
	18.1-4D-3.5	12/9/2015	3.5	3.5	11	463	0.296	3.2	28	-	8.7	535	2560	0.768	0.3	39	0.847	0.639	*ND*	38	1820
18.1-5	18.1-5-1	12/9/2015	1.0	9.4	7.4	451	0.408	5.0	26	-	12	452	2050	0.374	1.0	37	*ND*	0.622	*ND*	35	1310
	18.1-5-3.5	12/9/2015	3.5	7.5	2.3	208	0.277	2.3	12	-	7.1	232	1020	0.254	0.4	17	*ND*	0.472	*ND*	25	628
18.1-6	18.1-6-1	12/9/2015	1.0	2.7	0.80	153	*ND*	1.5	8.5	-	5.1	86	334	0.120	*ND*	7.5	*ND*	*ND*	*ND*	18	423
	18.1-6-3.5	12/9/2015	3.5	23	2.5	196	0.261	2.5	12	-	7.7	311	1510	0.240	*ND*	12	*ND*	0.397	*ND*	27	597
18.1-7	18.1-7-3.5	12/9/2015	3.5	1.9	1.5	121	0.264	1.7	11	-	7.5	53	122	0.115	*ND*	11	*ND*	*ND*	*ND*	28	178
18.2-1	18.2-1-1	04/20/2016	1.0	*ND*	16	163	0.338	14	45	-	13	132	468	0.125	*ND*	23	*ND*	*ND*	*ND*	34	4910
	18.2-1-3.5	04/20/2016	3.5	*ND*	*ND*	46	*ND*	*ND*	4.2	-	3.9	4.6	1.9	*ND*	*ND*	3.7	*ND*	*ND*	*ND*	13	22
18.2-2	18.2-2-1	04/20/2016	1.0	3.4	2.3	112	0.313	0.519	12	-	10	43	87	0.168	*ND*	10	*ND*	*ND*	*ND*	32	17
	18.2-2-3.5	04/20/2016	3.5	93	17	1450	0.291	8.1	45	-	9.4	2770	16100	1.0	*ND*	33	*ND*	2.7	*ND*	29	8730
18.2-3	18.2-3-1	04/20/2016	1.0	2.4	2.1	152	0.344	0.889	14	-	8.6	107	433	0.284	*ND*	11	*ND*	*ND*	*ND*	31	299
	18.2-3-3.5	04/20/2016	3.5	5.1	4.8	207	0.280	2.0	13	-	7.5	828	1310	0.829	0.3	14	*ND*	0.829	*ND*	27	1260
A-13-08	A08@5'	08/27/2013	5.0	*ND*	2.1	91	*ND*	*ND*	17	-	4.2	15	26	0.062	*ND*	7.5	*ND*	*ND*	*ND*	18	47
R-13-09	R09@10'	08/27/2013	10.0	*ND*	1.1	28	*ND*	*ND*	5.1	-	*ND*	5.2	*ND*	0.060	*ND*	3.3	*ND*	*ND*	*ND*	13	16
A-13-10	R10@5'	08/29/2013	5.0	*ND*	*ND*	52	*ND*	*ND*	5.8	-	4.2	5.6	*ND*	0.070	*ND*	4.2	*ND*	*ND*	*ND*	20	27
A-13-12	R12@5'	09/3/2013	5.0	*ND*	*ND*	39	*ND*	*ND*	7.9	-	3.4	34	480	0.120	*ND*	4.7	*ND*	*ND*	*ND*	19	42
	R12@10'	09/3/2013	10.0	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-
		# of non-detects =>		**77**	**33**	**0**	**79**	**63**	**0**	**0**	**2**	**1**	**4**	**39**	**86**	**0**	**84**	**82**	**95**	**0**	**0**
		# of detects =>		**18**	**62**	**95**	**16**	**32**	**95**	**2**	**93**	**94**	**92**	**56**	**9**	**95**	**11**	**13**	**0**	**95**	**95**
		# of samples =>		**95**	**95**	**95**	**95**	**95**	**95**	**2**	**95**	**95**	**96**	**95**	**95**	**95**	**95**	**95**	**95**	**95**	**95**
		frequency of detection =>		**19%**	**65%**	**100%**	**17%**	**34%**	**100%**	**100%**	**98%**	**99%**	**96%**	**59%**	**9%**	**100%**	**12%**	**14%**	**0%**	**100%**	**100%**
		minimum detected =>		**1.9**	**0.798**	**17**	**0.261**	**0.519**	**1.7**	**3.0**	**1.8**	**2.4**	**1.0**	**0.06**	**0.256**	**1.3**	**0.847**	**0.258**	**-**	**7.2**	**10**
		maximum detected =>		**452**	**26**	**2100**	**0.408**	**14**	**69**	**5.0**	**13**	**2770**	**16100**	**4.6**	**1.0**	**48**	**10**	**13**	**-**	**41.5**	**10000**

The Fehling Group, LLC

TABLE K-2

Soil Summary for PARC Area 6 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
6-1	6-1-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	6-1-1.0	05/15/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	6-1-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	6-1-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
6-2	6-2-0.5	05/16/2017	0.5	-	-	-	-	-	*ND*	*ND*	-	*ND*
	6-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-
	6-2-3.0	05/16/2017	3.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
	6-2-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-
6-3	6-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	6-3-1.0	05/15/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	6-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	6-3-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
6-4	6-4-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	6-4-1.0	05/15/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	6-4-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	6-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
6-5	6-5-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	6-5-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	6-5-3.0	05/15/2017	3.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	6-5-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
6-6	6-6-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	6-6-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	6-6-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
	6-6-7.5	05/15/2017	7.5	-	-	-	-	-	-	-	-	-
6-7	6-7-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	6-7-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	6-7-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
	6-7-7.5	05/15/2017	7.5	-	-	-	-	-	-	-	-	-
6-8	6-8-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	6-8-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	6-8-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
	6-8-7.5	05/15/2017	7.5	-	-	-	-	-	-	-	-	-

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TABLE K-2

Soil Summary for PARC Area 6 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
6-9	6-9-1.0	05/15/2017	1.0	-	-	-	*ND*	-	-	-	-	-
	6-9-3.0	05/15/2017	3.0	-	-	-	**7.6 (TCE)**	-	-	-	-	-
	6-9-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
	6-9-7.5	05/15/2017	7.5	-	-	-	-	-	-	-	-	-
6-10	6-10-1.0	05/15/2017	1.0	-	-	-	**7.1 (TCE)**	-	-	-	-	-
	6-10-3.0	05/15/2017	3.0	-	-	-	**7.2 (TCE)**	-	-	-	-	-
	6-10-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
	6-10-7.5	05/15/2017	7.5	-	-	-	-	-	-	-	-	-
16-5	16-5 @ 1'	02/12/2016	1.0	*ND*	**18**	-	*ND*	*ND*	-	-	-	*ND*
	16-5 @ 3'	02/12/2016	3.0	-	-	-	*ND*	-	-	-	-	-
	16-5 @ 4'	02/12/2016	4.0	-	-	-	*ND*	-	-	-	-	-
16-6	16-6 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	16-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
16-7	16-7 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	16-7 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	16-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
L-5	L-5 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-5 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-5 @ 4.5'	02/1/2016	4.5	-	-	-	-	-	-	-	-	-
L-5	L-5 @ 1'	02/26/2016	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	-
	L-5 @ 2'	02/26/2016	2.0	*ND*	*ND*	-	*ND*	**930 (Phenol)**	*ND*	*ND*	-	-
	L-5 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
L-6	L-6 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-6 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
L-6	L-6 @ 1'	02/26/2016	1.0	*ND*	**6600**	-	*ND*	*ND*	**240 (Arochlor 1260)**	*ND*	-	-
	L-6 @ 2'	02/26/2016	2.0	*ND*	*ND*	-	*ND*	**460 (Phenol)**	*ND*	*ND*	-	-
	L-6 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
18.1-GP-1	GP-1 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	-	-	-
	GP-1 @ 2'	04/1/2016	2.0	-	-	**480**	-	-	-	-	-	-
	GP-1 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	-	-	-
	GP-1 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	-	-	-
	GP-1 @ 6.5'	04/1/2016	6.5	-	-	**29**	-	-	-	-	-	-

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TABLE K-2

Soil Summary for PARC Area 6 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
18.1-GP-2	GP-2 @ 1'	04/1/2016	1.0	-	-	-	-	-	-	-	-	-
	GP-2 @ 2'	04/1/2016	2.0	-	-	-	-	-	-	-	-	-
	GP-2 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	-	-	-
	GP-2 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	-	-	-
18.1-GP-3	GP-3 @ 2'	04/1/2016	2.0	-	24	1000	-	-	-	-	-	-
	GP-3 @ 3.5'	04/1/2016	3.5	-	-	-	-	-	-	-	-	-
	GP-3 @ 5'	04/1/2016	5.0	-	-	-	-	-	-	-	-	-
18.1-1	18.1-1-1	10/22/2015	1.0	10	10	162	various	-	-	-	-	-
	18.1-1-3.5	10/22/2015	3.5	5	5.8	43	various	-	-	-	-	-
18.1-2	18.1-2-1	10/22/2015	1.0	5	5	9.6	various	-	-	-	-	-
	18.1-2-2.0	10/22/2015	2.0	25	25	96	various	-	-	-	-	-
18.1-3	18.1-3-1	10/22/2015	1.0	5	5	5	various	-	-	-	-	-
	18.1-3-3.5	10/22/2015	3.5	9.8	9.8	94	various	-	-	-	-	-
18.1-4	18.1-4-1	10/22/2015	1.0	5	5	36	various	-	-	-	-	-
	18.1-4-3.5	12/9/2015	3.5	5	5	5	various	-	-	-	-	-
18.1-4A	18.1-4A-1	12/9/2015	1.0	5	5	77	various	-	-	-	-	-
	18.1-4A-3.5	12/9/2015	3.5	5	5	100	various	-	-	-	-	-
18.1-4B	18.1-4B-1	12/9/2015	1.0	5	5	8.4	various	-	-	-	-	-
	18.1-4B-3.5	12/9/2015	3.5	5	5	5	various	-	-	-	-	-
18.1-4C	18.1-4C-1	12/9/2015	1.0	5	5	21	various	-	-	-	-	-
	18.1-4C-3.5	12/9/2015	3.5	5	5	5	various	-	-	-	-	-
18.1-4D	18.1-4D-1	12/9/2015	1.0	5	5	52	various	-	-	-	-	-
	18.1-4D-3.5	12/9/2015	3.5	5	5	150	various	-	-	-	-	-
18.1-5	18.1-5-1	12/9/2015	1.0	5	5	39	various	-	-	-	-	-
	18.1-5-3.5	12/9/2015	3.5	5	5	369	various	-	-	-	-	-
18.1-6	18.1-6-1	12/9/2015	1.0	5	5	5.7	various	-	-	-	-	-
	18.1-6-3.5	12/9/2015	3.5	5	5	51	various	-	-	-	-	-
18.1-7	18.1-7-3.5	12/9/2015	3.5	5	5	149	various	-	-	-	-	-
18.2-1	18.2-1-1	04/20/2016	1.0	5	5	5.6	11,000 (TCE)	-	-	-	-	-
	18.2-1-3.5	04/20/2016	3.5	5	5	5	various	-	-	-	-	-
18.2-2	18.2-2-1	04/20/2016	1.0	5	5	34	various	-	-	-	-	-
	18.2-2-3.5	04/20/2016	3.5	5	5	160	67 (TCE)	-	-	-	-	-
18.2-3	18.2-3-1	04/20/2016	1.0	5	5	22	8.0 (TCE)	-	-	-	-	-
	18.2-3-3.5	04/20/2016	3.5	5	5	47	53 (TCE)	-	-	-	-	-

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TABLE K-2

Soil Summary for PARC Area 6 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
A-13-08	A08@5'	08/27/2013	5.0	**300**	**5**	*ND*	*ND*	-	-	-	-	-
R-13-09	R09@10'	08/27/2013	10.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
A-13-10	R10@5'	08/29/2013	5.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
A-13-12	R12@5'	09/3/2013	5.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
	R12@10'	09/3/2013	10.0	-	-	-	-	-	-	-	-	-
			# of non-detects =>	**13**	**11**	**4**	**17**	**8**	**8**	**9**	**0**	**6**
			# of detects =>	**28**	**31**	**30**	**30**	**2**	**1**	**0**	**0**	**0**
			# of samples =>	**41**	**42**	**34**	**47**	**10**	**9**	**9**	**0**	**6**
			frequency of detection =>	**68%**	**74%**	**88%**	**64%**	**20%**	**11%**	**0%**	**-**	**0%**
			minimum detected =>	**5.0**	**5.0**	**5.0**	**various**	**460**	**240**	**-**	**-**	**-**
			maximum detected =>	**300**	**6600**	**1000**	**various**	**930**	**240**	**-**	**-**	**-**

The Fehling Group, LLC

TABLE K-3

Soil Gas and Ambient Air Summary for PARC Area 6

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cyclohexane
6-Am	-	5/16/2017	5	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NA*	15	*ND*	*ND*	*ND*	33	*NA*	*ND*	30	*ND*	*ND*	*ND*	*ND*	*NA*
			# of non-detects =>	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**0**
			# of detects =>	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
			# of samples =>	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**0**
			frequency of detection =>	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**-**	**100%**	**0%**	**0%**	**0%**	**100%**	**-**	**0%**	**100%**	**0%**	**0%**	**0%**	**0%**	**-**
			minimum detected =>	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15**	**-**	**-**	**-**	**33**	**-**	**-**	**30**	**-**	**-**	**-**	**-**	**-**
			maximum detected =>	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15**	**-**	**-**	**-**	**33**	**-**	**-**	**30**	**-**	**-**	**-**	**-**	**-**

The Fehling Group, LLC

TABLE K-3

Soil Gas and Ambient Air Summary for PARC Area 6

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
6-Am	-	5/16/2017	5	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NA*	*NA*
			# of non-detects =>	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**
			# of detects =>	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
			# of samples =>	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**
			frequency of detection =>	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**-**	**-**
			minimum detected =>	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
			maximum detected =>	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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TABLE K-4
Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*																Concentrations in Soil (dry weight basis, mg/kg)**																	
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs
6-1	6-1-0.5	05/15/2017	0.5	1	1.5	69	0.5	7.2	11	0.140	4.3	0.5	0.1	28	-	-	-	-	-	-	1	1.6	73	0.5	7.6	12	0.148	4.5	0.5	0.1	30	-	-	-	-	-	-
	6-1-1.0	05/15/2017	1.0	1	1.4	77	0.5	8.5	13	0.1	6.7	0.5	0.1	33	1	10	-	1	1	1	1	1.5	81	0.5	9.0	14	0.1	7.1	0.5	0.1	35	1.1	11	-	1.1	1.1	1.1
	6-1-3.0	05/15/2017	3.0	1	1	70	0.5	7.4	3.3	0.1	6.1	0.5	0.1	32	-	-	-	-	-	-	1	1	74	0.5	7.8	3.5	0.1	6.5	0.5	0.1	34	-	-	-	-	-	-
	6-1-5.0	05/15/2017	5.0	1	1	66	0.5	6.5	1.2	0.1	5.6	0.5	0.1	28	-	-	-	-	-	-	1	1	70	0.5	6.9	1.3	0.1	5.9	0.5	0.1	30	-	-	-	-	-	-
6-2	6-2-0.5	05/16/2017	0.5	1	2.9	110	0.5	6.8	90	0.330	3.2	0.5	0.1	62	-	-	-	-	-	1	1	3.1	116	0.5	7.2	95	0.349	3.4	0.5	0.1	66	-	-	-	-	-	1.1
	6-2-1.0	05/16/2017	1.0	1	1.2	87	0.5	15	38	0.780	8.0	0.5	0.1	89	-	-	-	-	-	-	1	1.3	92	0.5	16	40	0.825	8.5	0.5	0.1	94	-	-	-	-	-	-
	6-2-3.0	05/16/2017	3.0	1	1	29	0.5	2.5	1.2	0.1	2.4	0.5	0.1	13	1	10	-	1	1	-	1	1	31	0.5	2.6	1.3	0.1	2.5	0.5	0.1	14	1.1	11	-	1.1	1.1	-
	6-2-5.0	05/16/2017	5.0	1	1	34	0.5	3.0	1.2	0.1	2.4	0.5	0.1	14	-	-	-	-	-	-	1	1	36	0.5	3.2	1.3	0.1	2.5	0.5	0.1	15	-	-	-	-	-	-
6-3	6-3-0.5	05/15/2017	0.5	1	1	46	0.5	5.7	9.1	0.1	3.5	0.5	0.1	28	-	-	-	-	-	-	1	1	49	0.5	6.0	9.6	0.1	3.7	0.5	0.1	30	-	-	-	-	-	-
	6-3-1.0	05/15/2017	1.0	8.3	11	1900	12	250	4300	0.440	31	1.0	0.1	10000	1	10	-	1	1	1	8.8	12	2009	13	264	4548	0.465	33	1.1	0.1	10576	1.1	11	-	1.1	1.1	1.1
	6-3-3.0	05/15/2017	3.0	1	1.6	160	0.5	21	250	0.1	5.0	0.5	0.1	660	-	-	-	-	-	-	1	1.7	169	0.5	22	264	0.1	5.3	0.5	0.1	698	-	-	-	-	-	-
	6-3-5.0	05/15/2017	5.0	1	1	21	0.5	2.4	1.1	0.400	1.9	0.5	0.1	13	-	-	-	-	-	-	1	1	22	0.5	2.5	1.2	0.423	2.0	0.5	0.1	14	-	-	-	-	-	-
6-4	6-4-0.5	05/15/2017	0.5	1	2.3	95	0.5	13	30	0.170	5.6	0.5	0.1	55	-	-	-	-	-	-	1	2.4	100	0.5	14	32	0.180	5.9	0.5	0.1	58	-	-	-	-	-	-
	6-4-1.0	05/15/2017	1.0	1	26	71	1.2	41	94	0.1	8.4	0.5	0.1	960	1	10	-	1	1	1	1	27	75	1.3	43	99	0.1	8.9	0.5	0.1	1015	1.1	11	-	1.1	1.1	1.1
	6-4-3.0	05/15/2017	3.0	1	11	41	0.5	7.1	16	0.1	3.8	0.5	0.1	32	-	-	-	-	-	-	1	12	43	0.5	7.5	17	0.1	4.0	0.5	0.1	34	-	-	-	-	-	-
	6-4-5.0	05/15/2017	5.0	1	9.0	69	0.5	11	3.2	0.1	7.0	0.5	0.1	59	-	-	-	-	-	-	1	9.5	73	0.5	12	3.4	0.1	7.4	0.5	0.1	62	-	-	-	-	-	-
6-5	6-5-0.5	05/15/2017	0.5	4.0	9.1	95	2.3	82	400	0.170	12	0.5	0.1	950	-	-	-	-	-	-	4.2	9.6	100	2.4	87	423	0.180	13	0.5	0.1	1005	-	-	-	-	-	-
	6-5-1.0	05/15/2017	1.0	1	3.9	75	0.5	13	59	0.1	6.9	0.5	0.1	83	-	-	-	-	-	-	1	4.1	79	0.5	14	62	0.1	7.3	0.5	0.1	88	-	-	-	-	-	-
	6-5-3.0	05/15/2017	3.0	1	1.0	31	0.5	3.8	2.4	0.110	2.8	0.5	0.1	17	1	10	-	1	1	1	1	1.1	33	0.5	4.0	2.5	0.116	3.0	0.5	0.1	18	1.1	11	-	1.1	1.1	1.1
	6-5-5.0	05/15/2017	5.0	1	1	22	0.5	2.5	1.1	1.5	2.0	0.5	0.1	13	-	-	-	-	-	-	1	1	23	0.5	2.6	1.2	1.6	2.1	0.5	0.1	14	-	-	-	-	-	-
6-6	6-6-1.0	05/15/2017	1.0	1	1.1	120	0.5	13	12	0.120	12	0.5	0.1	45	-	-	-	-	-	-	1	1.2	127	0.5	14	13	0.127	13	0.5	0.1	48	-	-	-	-	-	-
	6-6-3.0	05/15/2017	3.0	1	1	30	0.5	3.0	1.2	0.1	2.5	0.5	0.1	13	-	-	-	-	-	-	1	1	32	0.5	3.2	1.3	0.1	2.6	0.5	0.1	14	-	-	-	-	-	-
	6-6-5.0	05/15/2017	5.0	1	1	52	0.5	4.0	1.1	0.1	3.0	0.5	0.1	14	-	-	-	-	-	-	1	1	55	0.5	4.2	1.2	0.1	3.2	0.5	0.1	15	-	-	-	-	-	-
	6-6-7.5	05/15/2017	7.5	1	1	32	0.5	4.1	1.2	0.1	3.8	0.5	0.1	17	-	-	-	-	-	-	1	1	34	0.5	4.3	1.3	0.1	4.0	0.5	0.1	18	-	-	-	-	-	-
6-7	6-7-1.0	05/15/2017	1.0	1	1	55	0.5	6.1	3.0	0.1	5.4	0.5	0.1	26	-	-	-	-	-	-	1	1	58	0.5	6.5	3.2	0.1	5.7	0.5	0.1	27	-	-	-	-	-	-
	6-7-3.0	05/15/2017	3.0	1	1	25	0.5	3.2	2.0	0.120	2.3	0.5	0.1	14	-	-	-	-	-	-	1	1	26	0.5	3.4	2.1	0.127	2.4	0.5	0.1	15	-	-	-	-	-	-
	6-7-5.0	05/15/2017	5.0	1	1	24	0.5	3.6	7.5	0.1	2.8	0.5	0.1	29	-	-	-	-	-	-	1	1	25	0.5	3.8	7.9	0.1	3.0	0.5	0.1	31	-	-	-	-	-	-
	6-7-7.5	05/15/2017	7.5	1	1	62	0.5	7.1	4.3	0.1	5.6	0.5	0.1	33	-	-	-	-	-	-	1	1	66	0.5	7.5	4.5	0.1	5.9	0.5	0.1	35	-	-	-	-	-	-

The Fehling Group, LLC

TABLE K-4
Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*																Concentrations in Soil (dry weight basis, mg/kg)**																	
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs
6-8	6-8-1.0	05/15/2017	1.0	*1*	**5.0**	**100**	*0.5*	**97**	**140**	**0.100**	**6.1**	*0.5*	*0.1*	**210**	-	-	-	-	-	-	*1*	**5.3**	**106**	*0.5*	**103**	**148**	**0.106**	**6.5**	*0.5*	*0.1*	**222**	-	-	-	-	-	-
	6-8-3.0	05/15/2017	3.0	*1*	*1*	**25**	*0.5*	**3.0**	**1.0**	*0.1*	**2.4**	*0.5*	*0.1*	**13**	-	-	-	-	-	-	*1*	*1*	**26**	*0.5*	**3.2**	**1.1**	*0.1*	**2.5**	*0.5*	*0.1*	**14**	-	-	-	-	-	-
	6-8-5.0	05/15/2017	5.0	*1*	*1*	**47**	*0.5*	**4.3**	**1.4**	*0.1*	**4.0**	*0.5*	*0.1*	**21**	-	-	-	-	-	-	*1*	*1*	**50**	*0.5*	**4.5**	**1.5**	*0.1*	**4.2**	*0.5*	*0.1*	**22**	-	-	-	-	-	-
	6-8-7.5	05/15/2017	7.5	*1*	*1*	**17**	*0.5*	*1*	*1*	**4.6**	**1.3**	*0.5*	*0.1*	**10**	-	-	-	-	-	-	*1*	*1*	**18**	*0.5*	*1*	*1*	**4.9**	**1.4**	*0.5*	*0.1*	**11**	-	-	-	-	-	-
6-9	6-9-1.0	05/15/2017	1.0	*1*	*1*	**79**	*0.5*	**17**	**33**	**0.190**	**9.1**	*0.5*	*0.1*	**61**	-	-	-	*1*	-	-	*1*	*1*	**84**	*0.5*	**18**	**35**	**0.201**	**9.6**	*0.5*	*0.1*	**65**	-	-	-	*1.1*	-	-
	6-9-3.0	05/15/2017	3.0	**47**	**9.4**	**110**	**1.1**	**390**	**3100**	**1.4**	**12**	*0.5*	**1.7**	**510**	-	-	-	**7.6**	-	-	**50**	**9.9**	**116**	**1.2**	**412**	**3279**	**1.5**	**13**	*0.5*	**1.8**	**539**	-	-	-	**8.0**	-	-
	6-9-5.0	05/15/2017	5.0	*1*	*1*	**81**	*0.5*	**41**	**41**	**0.200**	**8.7**	*0.5*	*0.1*	**56**	-	-	-	-	-	-	*1*	*1*	**86**	*0.5*	**43**	**43**	**0.212**	**9.2**	*0.5*	*0.1*	**59**	-	-	-	-	-	-
	6-9-7.5	05/15/2017	7.5	*1*	*1*	**78**	*0.5*	**8.8**	**3.4**	**0.200**	**7.0**	*0.5*	*0.1*	**36**	-	-	-	-	-	-	*1*	*1*	**82**	*0.5*	**9.3**	**3.6**	**0.212**	**7.4**	*0.5*	*0.1*	**38**	-	-	-	-	-	-
6-10	6-10-1.0	05/15/2017	1.0	*1*	*1*	**110**	*0.5*	**24**	**99**	**0.290**	**7.5**	*0.5*	*0.1*	**92**	-	-	-	**7.1**	-	-	*1*	*1*	**116**	*0.5*	**25**	**105**	**0.307**	**7.9**	*0.5*	*0.1*	**97**	-	-	-	**7.5**	-	-
	6-10-3.0	05/15/2017	3.0	**5.5**	**6.5**	**380**	**1.8**	**160**	**800**	**0.190**	**9.4**	*0.5*	*0.1*	**2100**	-	-	-	**7.2**	-	-	**5.8**	**6.9**	**402**	**1.9**	**169**	**846**	**0.201**	**9.9**	*0.5*	*0.1*	**2221**	-	-	-	**7.6**	-	-
	6-10-5.0	05/15/2017	5.0	*1*	**8.6**	**57**	*0.5*	**37**	**13**	*0.1*	**5.0**	*0.5*	*0.1*	**31**	-	-	-	-	-	-	*1*	**9.1**	**60**	*0.5*	**39**	**14**	*0.1*	**5.3**	*0.5*	*0.1*	**33**	-	-	-	-	-	-
	6-10-7.5	05/15/2017	7.5	*1*	*1*	**38**	*0.5*	**3.2**	**1.2**	*0.1*	**3.2**	*0.5*	*0.1*	**17**	-	-	-	-	-	-	*1*	*1*	**40**	*0.5*	**3.4**	**1.3**	*0.1*	**3.4**	*0.5*	*0.1*	**18**	-	-	-	-	-	-
16-5	16-5 @ 1'	02/12/2016	1.0	*1*	**2.0**	**56**	*0.5*	**8.4**	**19**	*0.1*	**4.7**	*0.5*	*0.1*	**40**	*1*	**18**	-	*1*	*1*	-	*1*	**2.1**	**59**	*0.5*	**8.9**	**20**	*0.1*	**5.0**	*0.5*	*0.1*	**42**	*1.1*	**19**	-	*1.1*	*1.1*	-
	16-5 @ 3'	02/12/2016	3.0	*1*	**2.1**	**55**	*0.5*	**9.4**	**19**	**0.150**	**5.1**	*0.5*	*0.1*	**39**	-	-	-	*1*	-	-	*1*	**2.2**	**58**	*0.5*	**9.9**	**20**	**0.159**	**5.4**	*0.5*	*0.1*	**41**	-	-	-	*1.1*	-	-
	16-5 @ 4'	02/12/2016	4.0	*1*	**2.3**	**59**	*0.5*	**8.8**	**21**	*0.1*	**5.6**	*0.5*	*0.1*	**42**	-	-	-	*1*	-	-	*1*	**2.4**	**62**	*0.5*	**9.3**	**22**	*0.1*	**5.9**	*0.5*	*0.1*	**44**	-	-	-	*1.1*	-	-
16-6	16-6 @ 1'	02/1/2016	1.0	*1*	**2.4**	**55**	*0.5*	**8.0**	**11**	**0.100**	**4.8**	*0.5*	*0.1*	**36**	-	-	-	-	-	-	*1*	**2.5**	**58**	*0.5*	**8.5**	**12**	**0.106**	**5.1**	*0.5*	*0.1*	**38**	-	-	-	-	-	-
	16-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-7	16-7 @ 1'	02/1/2016	1.0	*1*	**1.9**	**78**	*0.5*	**14**	**6.1**	**0.120**	**8.2**	*0.5*	*0.1*	**38**	-	-	-	-	-	-	*1*	**2.0**	**82**	*0.5*	**15**	**6.5**	**0.127**	**8.7**	*0.5*	*0.1*	**40**	-	-	-	-	-	-
	16-7 @ 3'	02/1/2016	3.0	*1*	**1.6**	**55**	*0.5*	**7.3**	**4.3**	*0.1*	**5.2**	*0.5*	*0.1*	**26**	-	-	-	-	-	-	*1*	**1.7**	**58**	*0.5*	**7.7**	**4.5**	*0.1*	**5.5**	*0.5*	*0.1*	**27**	-	-	-	-	-	-
	16-7 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-5	L-5 @ 1'	02/1/2016	1.0	*1*	**1.8**	**46**	*0.5*	**8.4**	**25**	*0.1*	**4.2**	*0.5*	*0.1*	**32**	-	-	-	-	-	-	*1*	**1.9**	**49**	*0.5*	**8.9**	**26**	*0.1*	**4.4**	*0.5*	*0.1*	**34**	-	-	-	-	-	-
	L-5 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-5 @ 4.5'	02/1/2016	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-5	L-5 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	*1*	*10*	-	*1*	*1*	*1*	-	-	-	-	-	-	-	-	-	-	-	*1.1*	*11*	-	*1.1*	*1.1*	*1.1*
	L-5 @ 2'	02/26/2016	2.0	*1*	*1*	**46**	*0.5*	**6.9**	**2.7**	*0.1*	**3.9**	*0.5*	*0.1*	**23**	*1*	*10*	-	*1*	**930**	*1*	*1*	*1*	**49**	*0.5*	**7.3**	**2.9**	*0.1*	**4.1**	*0.5*	*0.1*	**24**	*1.1*	*11*	-	*1.1*	**984**	*1.1*
	L-5 @ 3'	02/26/2016	3.0	*1*	*1*	**30**	*0.5*	**2.8**	*1*	*0.1*	**2.5**	*0.5*	*0.1*	**14**	-	-	-	-	-	-	*1*	*1*	**32**	*0.5*	**3.0**	*1*	*0.1*	**2.6**	*0.5*	*0.1*	**15**	-	-	-	-	-	-

The Fehling Group, LLC

TABLE K-4
Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*																Concentrations in Soil (dry weight basis, mg/kg)**																	
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs
L-6	L-6 @ 1'	02/1/2016	1.0	1	10	130	0.5	64	200	0.150	12	0.5	0.1	310	-	-	-	-	-	-	1	11	137	0.5	68	212	0.159	13	0.5	0.1	328	-	-	-	-	-	-
	L-6 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-6 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-6	L-6 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	1	6600	-	1	1	240	-	-	-	-	-	-	-	-	-	-	1.1	6980	-	1.1	1.1	254
	L-6 @ 2'	02/26/2016	2.0	1	26	93	0.5	10	5.8	0.1	7.4	0.5	0.1	53	1	10	-	1	460	1	1	27	98	0.5	11	6.1	0.1	7.8	0.5	0.1	56	1.1	11	-	1.1	487	1.1
	L-6 @ 3'	02/26/2016	3.0	1	17	48	0.5	5.0	2.4	0.1	3.8	0.5	0.1	24	-	-	-	-	-	-	1	18	51	0.5	5.3	2.5	0.1	4.0	0.5	0.1	25	-	-	-	-	-	-
18.1-GP-1	GP-1 @ 1'	04/1/2016	1.0	1	1.9	73	0.5	19	53	0.550	12	0.5	0.1	85	-	-	-	-	-	-	1	2.0	77	0.5	20	56	0.582	13	0.5	0.1	90	-	-	-	-	-	-
	GP-1 @ 2'	04/1/2016	2.0	1	2.4	160	1.6	23	74	0.750	8.9	0.5	0.1	230	-	-	480	-	-	-	1	2.5	169	1.7	24	78	0.793	9.4	0.5	0.1	243	-	-	508	-	-	-
	GP-1 @ 3.5'	04/1/2016	3.5	1	1.8	70	0.5	15	34	0.120	7.6	0.5	0.1	62	-	-	-	-	-	-	1	1.9	74	0.5	16	36	0.127	8.0	0.5	0.1	66	-	-	-	-	-	-
	GP-1 @ 5'	04/1/2016	5.0	1	1.0	41	0.5	4.7	1.6	0.1	3.9	0.5	0.1	20	-	-	-	-	-	-	1	1.1	43	0.5	5.0	1.7	0.1	4.1	0.5	0.1	21	-	-	-	-	-	-
	GP-1 @ 6.5'	04/1/2016	6.5	7.3	2.2	100	0.5	44	170	1.1	15	0.5	0.1	290	-	-	29	-	-	-	7.7	2.3	106	0.5	47	180	1.2	16	0.5	0.1	307	-	-	31	-	-	-
18.1-GP-2	GP-2 @ 1'	04/1/2016	1.0	1	1.9	69	0.5	12	44	1.3	5.5	0.5	0.1	100	-	-	-	-	-	-	1	2.0	73	0.5	13	47	1.4	5.8	0.5	0.1	106	-	-	-	-	-	-
	GP-2 @ 2'	04/1/2016	2.0	1	1	2100	0.5	1400	8300	0.670	47	0.5	0.1	8300	-	-	-	-	-	-	1	1	2221	0.5	1481	8778	0.709	50	0.5	0.1	8778	-	-	-	-	-	-
	GP-2 @ 3.5'	04/1/2016	3.5	1	2.0	65	0.5	23	71	0.350	7.6	0.5	0.1	70	-	-	-	-	-	-	1	2.1	69	0.5	24	75	0.370	8.0	0.5	0.1	74	-	-	-	-	-	-
	GP-2 @ 5'	04/1/2016	5.0	1	1	49	0.5	7.1	1.5	0.1	4.2	0.5	0.1	24	-	-	-	-	-	-	1	1	52	0.5	7.5	1.6	0.1	4.4	0.5	0.1	25	-	-	-	-	-	-
18.1-GP-3	GP-3 @ 2'	04/1/2016	2.0	1	3.3	67	0.5	18	62	0.110	6.1	0.5	0.1	92	-	24	1000	-	-	-	1	3.5	71	0.5	19	66	0.116	6.5	0.5	0.1	97	-	25	1058	-	-	-
	GP-3 @ 3.5'	04/1/2016	3.5	1	1.2	42	0.5	5.4	1.4	0.1	3.7	0.5	0.1	20	-	-	-	-	-	-	1	1.3	44	0.5	5.7	1.5	0.1	3.9	0.5	0.1	21	-	-	-	-	-	-
	GP-3 @ 5'	04/1/2016	5.0	1	1	44	0.5	4.4	1.5	0.1	3.2	0.5	0.1	19	-	-	-	-	-	-	1	1	47	0.5	4.7	1.6	0.1	3.4	0.5	0.1	20	-	-	-	-	-	-
18.1-1	18.1-1-1	10/22/2015	1.0	1	2.0	98	1.8	24	61	0.182	14	0.5	0.1	112	10	10	162	various	-	-	1	2.1	103	1.9	25	65	0.192	15	0.5	0.1	118	11	11	171	various	-	-
	18.1-1-3.5	10/22/2015	3.5	1	1	64	1.0	8.0	4.7	0.1	6.1	0.5	0.1	35	5	5.8	43	various	-	-	1	1	68	1.0	8.5	4.9	0.1	6.5	0.5	0.1	37	5.3	6.1	45	various	-	-
18.1-2	18.1-2-1	10/22/2015	1.0	1	1	146	1.1	12	25	0.108	8.6	0.870	0.1	61	5	5	9.6	various	-	-	1	1	154	1.2	13	27	0.114	9.1	0.920	0.1	64	5.3	5.3	10	various	-	-
	18.1-2-2.0	10/22/2015	2.0	1	0.82	134	1.4	95	293	0.180	48	0.5	0.1	288	25	25	96	various	-	-	1	0.86	142	1.5	100	310	0.190	51	0.5	0.1	305	26	26	102	various	-	-
18.1-3	18.1-3-1	10/22/2015	1.0	1	1	73	1.4	12	3.5	0.103	22	0.5	0.1	40	5	5	5	various	-	-	1	1	77	1.5	13	3.7	0.109	23	0.5	0.1	42	5.3	5.3	5.3	various	-	-
	18.1-3-3.5	10/22/2015	3.5	1	1.7	202	2.8	64	554	0.862	19	0.5	0.297	545	9.8	9.8	94	various	-	-	1	1.8	214	3.0	68	586	0.912	20	0.5	0.314	576	10	10	99	various	-	-
18.1-4	18.1-4-1	10/22/2015	1.0	1	8.5	443	4.0	312	1010	1.2	40	0.5	0.258	1400	5	5	36	various	-	-	1	9.0	469	4.2	330	1068	1.3	42	0.5	0.273	1481	5.3	5.3	38	various	-	-
	18.1-4-3.5	12/9/2015	3.5	1	3.6	73	0.8	13	17	0.1	7.0	1.0	0.1	69	5	5	5	various	-	-	1	3.8	77	0.8	14	18	0.1	7.4	1.0	0.1	73	5.3	5.3	5.3	various	-	-
18.1-4A	18.1-4A-1	12/9/2015	1.0	452	10.0	486	5.4	531	13900	0.468	22	1.2	13	2140	5	5	77	various	-	-	478	10.5	514	5.8	562	14701	0.495	23	1.2	13	2263	5.3	5.3	81	various	-	-
	18.1-4A-3.5	12/9/2015	3.5	1	4.6	99	0.9	18	30	0.1	9.3	2.1	0.1	69	5	5	100	various	-	-	1	4.8	105	1.0	19	31	0.1	9.8	2.2	0.1	73	5.3	5.3	106	various	-	-

The Fehling Group, LLC

TABLE K-4

Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*																Concentrations in Soil (dry weight basis, mg/kg)**																	
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs	Antimony	Arsenic	Barium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	TPH-GRO	TPH-DRO	TPH-ORO	VOCs	SVOCs	PCBs
18.1-4B	18.1-4B-1	12/9/2015	1.0	5.1	14	444	2.7	475	1690	0.341	18	1.2	0.710	1500	5	5	8.4	various	-	-	5.4	15	470	2.9	502	1787	0.361	19	1.3	0.751	1586	5.3	5.3	8.9	various	-	-
	18.1-4B-3.5	12/9/2015	3.5	*1*	3.0	65	0.7	6.0	2.9	*0.1*	5.9	1.7	*0.1*	37	5	5	5	various	-	-	*1*	3.2	69	0.7	6.4	3.0	*0.1*	6.2	1.8	*0.1*	39	5.3	5.3	5.3	various	-	-
18.1-4C	18.1-4C-1	12/9/2015	1.0	9.5	13	727	3.2	552	1930	0.439	18	1.7	0.547	1990	5	5	21	various	-	-	10.0	13	769	3.3	584	2041	0.464	19	1.8	0.579	2105	5.3	5.3	22	various	-	-
	18.1-4C-3.5	12/9/2015	3.5	*1*	3.6	71	0.8	6.7	8.8	*0.1*	6.7	10	*0.1*	56	5	5	5	various	-	-	*1*	3.8	75	0.8	7.0	9.3	*0.1*	7.0	11	*0.1*	60	5.3	5.3	5.3	various	-	-
18.1-4D	18.1-4D-1	12/9/2015	1.0	*1*	11	474	2.9	308	1170	0.456	25	1.4	0.434	1550	5	5	52	various	-	-	*1*	11	501	3.1	326	1237	0.482	27	1.5	0.459	1639	5.3	5.3	55	various	-	-
	18.1-4D-3.5	12/9/2015	3.5	3.5	11	463	3.2	535	2560	0.768	39	0.847	0.639	1820	5	5	150	various	-	-	3.7	11	490	3.3	566	2708	0.812	41	0.896	0.676	1925	5.3	5.3	159	various	-	-
18.1-5	18.1-5-1	12/9/2015	1.0	9.4	7.4	451	5.0	452	2050	0.374	37	*0.5*	0.622	1310	5	5	39	various	-	-	9.9	7.8	477	5.2	478	2168	0.396	40	*0.5*	0.658	1385	5.3	5.3	41	various	-	-
	18.1-5-3.5	12/9/2015	3.5	7.5	2.3	208	2.3	232	1020	0.254	17	*0.5*	0.472	628	5	5	369	various	-	-	7.9	2.5	220	2.4	245	1079	0.269	18	*0.5*	0.499	664	5.3	5.3	390	various	-	-
18.1-6	18.1-6-1	12/9/2015	1.0	2.7	0.80	153	1.5	86	334	0.120	7.5	*0.5*	*0.1*	423	5	5	5.7	various	-	-	2.8	0.84	162	1.5	91	353	0.127	7.9	*0.5*	*0.1*	447	5.3	5.3	6.0	various	-	-
	18.1-6-3.5	12/9/2015	3.5	23	2.5	196	2.5	311	1510	0.240	12	*0.5*	0.397	597	5	5	51	various	-	-	24	2.6	207	2.6	329	1597	0.254	12	*0.5*	0.420	631	5.3	5.3	54	various	-	-
18.1-7	18.1-7-3.5	12/9/2015	3.5	1.9	1.5	121	1.7	53	122	0.115	11	*0.5*	*0.1*	178	5	5	149	various	-	-	2.0	1.5	128	1.8	56	129	0.122	12	*0.5*	*0.1*	188	5.3	5.3	158	various	-	-
18.2-1	18.2-1-1	04/20/2016	1.0	*1*	16	163	14	132	468	0.125	23	*0.5*	*0.1*	4910	5	5	5.6	11,000	-	-	*1*	16	172	15	140	495	0.132	24	*0.5*	*0.1*	5193	5.3	5.3	5.9	11634	-	-
	18.2-1-3.5	04/20/2016	3.5	*1*	*1*	46	*0.5*	4.6	1.9	*0.1*	3.7	*0.5*	*0.1*	22	5	5	5	various	-	-	*1*	*1*	48	*0.5*	4.9	2.0	*0.1*	3.9	*0.5*	*0.1*	23	5.3	5.3	5.3	various	-	-
18.2-2	18.2-2-1	04/20/2016	1.0	3.4	2.3	112	0.5	43	87	0.168	10	*0.5*	*0.1*	17	5	5	34	various	-	-	3.6	2.4	118	0.5	46	92	0.178	11	*0.5*	*0.1*	18	5.3	5.3	36	various	-	-
	18.2-2-3.5	04/20/2016	3.5	93	17	1450	8.1	2770	16100	1.0	33	*0.5*	2.7	8730	5	5	160	67	-	-	98	18	1534	8.5	2930	17028	1.0	35	*0.5*	2.9	9233	5.3	5.3	169	71	-	-
18.2-3	18.2-3-1	04/20/2016	1.0	2.4	2.1	152	0.9	107	433	0.284	11	*0.5*	*0.1*	299	5	5	22	8	-	-	2.6	2.2	161	0.9	113	458	0.300	11	*0.5*	*0.1*	316	5.3	5.3	23	8.5	-	-
	18.2-3-3.5	04/20/2016	3.5	5.1	4.8	207	2.0	828	1310	0.829	14	*0.5*	0.829	1260	5	5	47	53	-	-	5.4	5.0	219	2.2	876	1385	0.877	15	*0.5*	0.877	1333	5.3	5.3	50	56	-	-
A-13-08	A08@5'	08/27/2013	5.0	*1*	2.1	91	*0.5*	15	26	0.062	7.5	*0.5*	*0.1*	47	300	5	*10*	*1*	-	-	*1*	2.2	96	*0.5*	16	27	0.066	7.9	*0.5*	*0.1*	50	317	5.3	*11*	*1.1*	-	-
R-13-09	R09@10'	08/27/2013	10.0	*1*	1.1	28	*0.5*	5.2	*1*	0.060	3.3	*0.5*	*0.1*	16	*1*	*10*	*10*	*1*	-	-	*1*	1.2	30	*0.5*	5.5	*1*	0.063	3.5	*0.5*	*0.1*	17	*1.1*	*11*	*11*	*1.1*	-	-
A-13-10	R10@5'	08/29/2013	5.0	*1*	*1*	52	*0.5*	5.6	*1*	0.070	4.2	*0.5*	*0.1*	27	*1*	*10*	*10*	*1*	-	-	*1*	*1*	55	*0.5*	5.9	*1*	0.074	4.4	*0.5*	*0.1*	29	*1.1*	*11*	*11*	*1.1*	-	-
A-13-12	R12@5'	09/3/2013	5.0	*1*	*1*	39	*0.5*	34	480	0.120	4.7	*0.5*	*0.1*	42	*1*	*10*	*10*	*1*	-	-	*1*	*1*	41	*0.5*	36	508	0.127	5.0	*0.5*	*0.1*	44	*1.1*	*11*	*11*	*1.1*	-	-
	R12@10'	09/3/2013	10.0	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-
95% UCL for 0 to 10 ft bgs (see Attachment O)* =>				**31**	**6.6**	**332**	**2.4**	**286**	**1839**	**0.591**	**21**	**0.91**	**0.94**	**1427**	**46**	**898**	**253**	**11634**	**984**	**254**																	

* Italicized value is the reporting limit for 'non-detect' ('ND') result.

* 95% UCL not calculated due to low number of samples; value shown is maximum value. For VOCs, SVOCs, and PCBs, the values shown are for TCE, Phenol, and Arochlor 1260, respectively.

** Dry weight concentration = Wet weight concentration x (1 + average moisture content) where average moisture content = 0.056 g/g (see **Table 1**).

The Fehling Group, LLC

TABLE K-5
Soil Risk Characterization Summary
~ PARC Area 6 ~

		Soil RBC (mg/kg)*				Risk Values (Incremental Lifetime Cancer Risk [ILCR] and Hazard Quotient [HQ])			
		Residential Receptor		Construction Worker Receptor		Residential Receptor		Construction Worker Receptor	
Soil COPC	**Soil EPC (mg/kg, dry weight basis)**	**Cancer Endpoint**	**Noncancer Endpoint**	**Cancer Endpoint**	**Noncancer Endpoint**	**ILCR (unitless)**	**HQ (unitless)**	**ILCR (unitless)**	**HQ (unitless)**
Antimony	31	--	3.10E+01	--	1.42E+02	--	1.0E+00	--	2.2E-01
Arsenic	6.6	**Soil EPC below regional background of 12 mg/kg (no longer a COPC - no risk values calculated)**							
Barium	332	--	1.50E+04	--	3.02E+03	--	2.2E-02	--	1.1E-01
Cadmium	2.4	9.09E+02	5.23E+00	1.05E+02	4.27E+01	2.6E-09	4.5E-01	2.3E-08	5.6E-02
Copper	286	--	3.10E+03	--	1.42E+04	--	9.2E-02	--	2.0E-02
Lead	1839	Not applicable (see Section 3.2.1.2)							
Mercury	0.59	--	1.01E+00	--	4.36E+01	--	5.9E-01	--	1.4E-02
Nickel	21	1.47E+04	4.87E+02	1.70E+03	8.63E+01	1.4E-09	4.4E-02	1.2E-08	2.5E-01
Selenium	0.91	--	3.90E+02	--	1.75E+03	--	2.3E-03	--	5.2E-04
Silver	0.94	--	2.27E+02	--	1.77E+03	--	4.1E-03	--	5.3E-04
Zinc	1427	--	2.30E+04	--	1.06E+05	--	6.2E-02	--	1.3E-02
TPH-GRO	46	--	8.20E+01	--	2.77E+03	--	5.6E-01	--	1.7E-02
TPH-DRO	898	--	9.60E+01	--	8.85E+02	--	9.4E+00	--	1.0E+00
TPH-ORO	253	--	2.50E+03	--	3.24E+04	--	1.0E-01	--	7.8E-03
Phenol	0.98	--	1.90E+04	--	9.79E+04	--	5.2E-05	--	1.0E-05
Arochlor 1260	0.25	2.40E-01	--	5.60E+00	--	1.1E-06	--	4.5E-08	--
		Cumulative Risk Values (ILCR and HI Values) =>				**1.1E-06**	**1.1E+01**	**8.0E-08**	**1.5E+00**

* "Combined" value listed in **Table 5** for the residential receptor and **Table 6** for the construction worker receptor.

ATTACHMENT L

Tables for PARC Area 7

TABLE L-1

Soil Summary for PARC Area 7 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
7-1	7-1-0.5	05/16/2017	0.5	ND	2.7	110	ND	ND	14	-	6.8	4500	45	0.13	ND	12	ND	ND	ND	30	100
	7-1-1.0	05/16/2017	1.0	ND	1.2	120	ND	ND	8.8	-	4.8	700	69	0.22	ND	13	ND	ND	ND	24	270
	7-2-0.5	05/15/2017	0.5	ND	ND	93	ND	ND	6.1	-	4.3	8.3	27	0.18	ND	4.3	ND	ND	ND	19	57
	7-2-1.0	05/15/2017	1.0	ND	ND	35	ND	ND	4.5	-	3.9	3.1	1.1	ND	ND	3.2	ND	ND	ND	15	17
7-2	7-2-3.0	05/15/2017	3.0	ND	ND	23	ND	ND	2.9	-	2.5	2.1	ND	0.19	ND	2.1	ND	ND	ND	11	13
	7-2-5.0	05/15/2017	5.0	ND	ND	24	ND	ND	2.7	-	2.2	ND	ND	ND	ND	1.9	ND	ND	ND	10	11
7-3	7-3-0.5	05/15/2017	0.5	ND	2.5	110	ND	ND	13	-	7.8	39	51	0.17	ND	11	ND	ND	ND	28	93
	7-3-1.0	05/15/2017	1.0	ND	1.1	77	ND	ND	8.3	-	6.1	11	33	0.11	ND	5.9	ND	ND	ND	26	44
	7-3-3.0	05/15/2017	3.0	ND	ND	61	ND	ND	7.1	-	5.3	6.8	7.0	ND	ND	4.8	ND	ND	ND	23	32
	7-3-5.0	05/15/2017	5.0	ND	ND	34	ND	ND	4.6	-	3.3	3.1	ND	ND	ND	2.9	ND	ND	ND	18	15
7-4	7-4-0.5	05/15/2017	0.5	ND	1.1	130	ND	ND	12	-	8.2	36	70	0.11	ND	9.3	1.2	ND	ND	32	150
	7-4-1.0	05/15/2017	1.0	ND	ND	100	ND	ND	9.8	-	6.2	44	43	0.12	ND	9.5	1.1	ND	ND	26	130
	7-4-3.0	05/15/2017	3.0	ND	ND	92	ND	ND	11	-	7.6	13	31	0.64	ND	8.4	ND	ND	ND	29	80
	7-4-5.0	05/15/2017	5.0	ND	2.3	150	ND	ND	13	-	4.6	35	12	ND	ND	22	ND	ND	ND	23	890
7-5	7-5-0.5	05/16/2017	0.5	ND	ND	95	ND	ND	12	-	8.0	9.7	4.5	ND	ND	8.3	ND	ND	ND	32	39
	7-5-1.0	05/16/2017	1.0	ND	ND	95	ND	ND	12	-	8.2	10	3.0	ND	ND	8.6	1.0	ND	ND	34	38
	7-5-3.0	05/16/2017	3.0	ND	ND	120	ND	ND	14	-	9.9	18	3.5	ND	ND	12	1.1	ND	ND	38	46
	7-5-5.0	05/16/2017	5.0	ND	ND	31	ND	ND	6.7	-	3.6	2.7	1.0	ND	ND	3.0	ND	ND	ND	28	16
7-6	7-6-0.5	05/16/2017	0.5	ND	1.2	91	ND	ND	8.4	-	5.2	28	31	0.13	ND	7.3	ND	ND	ND	23	77
	7-6-1.0	05/16/2017	1.0	ND	ND	93	ND	ND	8.7	-	5.7	28	22	0.16	ND	6.7	ND	ND	ND	24	60
	7-6-3.0	05/16/2017	3.0	ND	ND	78	ND	ND	8.2	-	5.2	12	13	ND	ND	6.1	ND	ND	ND	23	50
	7-6-5.0	05/16/2017	5.0	ND	ND	40	ND	ND	5.0	-	3.5	4.6	2.7	ND	ND	3.4	ND	ND	ND	16	19
7-7	7-7-0.5	05/16/2017	0.5	ND	ND	110	ND	ND	14	-	9.3	13	3.7	ND	ND	10	ND	ND	ND	35	41
	7-7-1.0	05/16/2017	1.0	ND	ND	130	ND	ND	12	-	11	9.6	2.3	ND	ND	9.4	ND	ND	ND	37	47
	7-7-3.0	05/16/2017	3.0	ND	ND	26	ND	ND	5.0	-	2.9	2.2	ND	ND	ND	2.4	ND	ND	ND	22	13
	7-7-5.0	05/16/2017	5.0	ND	ND	17	ND	ND	3.2	-	2.1	ND	ND	ND	ND	1.8	ND	ND	ND	14	12
L-2	L-2 @ 1'	02/1/2016	1.0	ND	1.8	97	ND	ND	8.7	-	4.7	11	6.4	ND	ND	6.5	ND	ND	ND	23	37
	L-2 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The Fehling Group, LLC

TABLE L-1

Soil Summary for PARC Area 7 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
L-3	L-3 @ 1'	02/1/2016	1.0	*ND*	1.6	68	*ND*	*ND*	6.4	-	3.9	21	22	0.10	*ND*	6.1	*ND*	*ND*	*ND*	18	81
	L-3 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-3 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-4	L-4 @ 1'	02/1/2016	1.0	*ND*	3.6	250	*ND*	1.5	11	-	5.3	84	98	0.27	*ND*	12	*ND*	*ND*	*ND*	25	290
	L-4 @ 3'	02/1/2016	3.0	*ND*	1.5	86	*ND*	*ND*	9.0	-	5.7	9.6	2.0	*ND*	*ND*	6.9	*ND*	*ND*	*ND*	27	38
	L-4 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-2	L-2 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-2 @ 2'	02/26/2016	2.0	*ND*	1.0	33	*ND*	*ND*	4.1	-	2.4	3.7	1.2	*ND*	*ND*	3.1	*ND*	*ND*	*ND*	12	16
	L-2 @ 3'	02/26/2016	3.0	*ND*	1.3	37	*ND*	*ND*	5.2	-	2.9	4.4	1.4	*ND*	*ND*	3.7	*ND*	*ND*	*ND*	17	20
L-3	L-3 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-3 @ 2'	02/26/2016	2.0	*ND*	1.6	88	*ND*	*ND*	9.8	-	6.3	9.5	2.3	*ND*	*ND*	7.2	*ND*	*ND*	*ND*	30	41
	L-3 @ 3'	02/26/2016	3.0	*ND*	1.7	89	*ND*	*ND*	10	-	6.6	9.8	2.4	*ND*	*ND*	7.4	*ND*	*ND*	*ND*	31	41
L-4	L-4 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-4 @ 2'	02/26/2016	2.0	*ND*	2.2	130	*ND*	*ND*	12	-	6.7	26	14	*ND*	*ND*	9.9	*ND*	*ND*	*ND*	31	96
	L-4 @ 3'	02/26/2016	3.0	*ND*	2.6	130	*ND*	*ND*	12	-	5.3	37	67	0.17	*ND*	11	*ND*	*ND*	*ND*	24	150
20-1	20-1-1	04/20/2016	1.0	*ND*	2.7	172	*ND*	1.33	24.8	-	6.7	74	240	1.2	1.0	10	*ND*	0.401	*ND*	25.8	170
A13-14	A14@10'	09/5/2013	10.0	*ND*	*ND*	46	*ND*	1.2	9.1	-	4.4	6.8	*ND*	0.036	*ND*	4.8	*ND*	*ND*	*ND*	33	26
A13-15	R15@5'	08/23/2013	5.0	*ND*	1.4	50	*ND*	*ND*	9.4	-	3.2	34	18	0.074	*ND*	4.7	*ND*	*ND*	*ND*	17	58
		# of non-detects =>		**39**	**20**	**0**	**39**	**36**	**0**	**0**	**0**	**2**	**6**	**22**	**38**	**0**	**35**	**38**	**39**	**0**	**0**
		# of detects =>		**0**	**19**	**39**	**0**	**3**	**39**	**0**	**39**	**37**	**33**	**17**	**1**	**39**	**4**	**1**	**0**	**39**	**39**
		# of samples =>		**39**	**39**	**39**	**39**	**39**	**39**	**0**	**39**	**39**	**39**	**39**	**39**	**39**	**39**	**39**	**39**	**39**	**39**
		frequency of detection =>		**0%**	**49%**	**100%**	**0%**	**8%**	**100%**	**-**	**100%**	**95%**	**85%**	**44%**	**3%**	**100%**	**10%**	**3%**	**0%**	**100%**	**100%**
		minimum detected =>		**-**	**1**	**17**	**-**	**1.2**	**2.7**	**-**	**2.1**	**2.1**	**1**	**0.036**	**1.0**	**1.8**	**1**	**0.401**	**-**	**10**	**11**
		maximum detected =>		**-**	**3.6**	**250**	**-**	**1.5**	**24.8**	**-**	**11**	**4500**	**240**	**1.22**	**1.0**	**22**	**1.2**	**0.401**	**-**	**38**	**890**

The Fehling Group, LLC

TABLE L-2

Soil Summary for PARC Area 7 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
7-1	7-1-0.5	05/16/2017	0.5	*ND*	**62**	-	*ND*	*ND*	-	-	-	-
	7-1-1.0	05/16/2017	1.0	*ND*	**120**	-	*ND*	*ND*	*ND*	**3.4 (4,4'-DDD) 5.9 (4,4'-DDE) 6.1 (4,4'-DDT) 2.5 (alpha-BHC)**	-	*ND*
7-2	7-2-0.5	05/15/2017	0.5	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	7-2-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	7-2-3.0	05/15/2017	3.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
	7-2-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
7-3	7-3-0.5	05/15/2017	0.5	-	-	-	-	-	-	-	-	-
	7-3-1.0	05/15/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	7-3-3.0	05/15/2017	3.0	-	-	-	-	-	-	-	-	-
	7-3-5.0	05/15/2017	5.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
7-4	7-4-0.5	05/15/2017	0.5	*ND*	**26**	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	7-4-1.0	05/15/2017	1.0	-	-	-	-	-	-	-	-	-
	7-4-3.0	05/15/2017	3.0	*ND*	**6300**	-	*ND*	*ND*	-	-	-	-
	7-4-5.0	05/15/2017	5.0	-	-	-	-	-	-	-	-	-
7-5	7-5-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-
	7-5-1.0	05/16/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	7-5-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-
	7-5-5.0	05/16/2017	5.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
7-6	7-6-0.5	05/16/2017	0.5	*ND*	**200**	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	7-6-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-
	7-6-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-
	7-6-5.0	05/16/2017	5.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
7-7	7-7-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-
	7-7-1.0	05/16/2017	1.0	-	-	-	-	-	*ND*	*ND*	-	*ND*
	7-7-3.0	05/16/2017	3.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
	7-7-5.0	05/16/2017	5.0	*ND*	**470**	-	*ND*	*ND*	-	-	-	-
L-2	L-2 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-2 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
L-3	L-3 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-3 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-3 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-

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TABLE L-2

Soil Summary for PARC Area 7 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
L-4	L-4 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-4 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-4 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
L-2	L-2 @ 1'	02/26/2016	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	-
	L-2 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-2 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
L-3	L-3 @ 1'	02/26/2016	1.0	*ND*	**18**	-	*ND*	*ND*	*ND*	**2.9 (4,4'-DDT)**	-	-
	L-3 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-3 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
L-4	L-4 @ 1'	02/26/2016	1.0	*ND*	**20**	-	*ND*	*ND*	*ND*	**2.1 (4,4'-DDT)**	-	-
	L-4 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-4 @ 3'	02/26/2016	3.0	-	-	-	-	-	-	-	-	-
20-1	20-1-1	04/20/2016	1.0	**5**	**5**	**25**	**various**	-	-	-	-	-
A13-14	A14@10'	09/5/2013	10.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
A13-15	R15@5'	08/23/2013	5.0	*ND*	*ND*	*ND*	*ND*	-	-	-	-	-
		# of non-detects =>		**19**	**11**	**2**	**19**	**17**	**10**	**4**	**0**	**7**
		# of detects =>		**1**	**9**	**1**	**1**	**0**	**0**	**3**	**0**	**0**
		# of samples =>		**20**	**20**	**3**	**20**	**17**	**10**	**7**	**0**	**7**
		frequency of detection =>		**5%**	**45%**	**33%**	**5%**	**0%**	**0%**	**43%**	**-**	**0%**
		minimum detected =>		**5**	**5**	**25**	**various**	**-**	**-**	**various**	**-**	**-**
		maximum detected =>		**5**	**6300**	**25**	**various**	**-**	**-**	**various**	**-**	**-**

The Fehling Group, LLC

TABLE L-3

Soil Gas and Ambient Air Summary for PARC Area 7

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cyclohexane	Dichlorodifluoromethane	Ethanol
7-1	7-1-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	27	ND	ND	ND	62	NA	9	28	ND	ND	ND	ND	NA	ND	NA
7-3	7-3-5	5/16/2017	5	ND	ND	40	120	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	17	ND	NA	ND	NA
7-4	7-4-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	370	ND	ND	26	ND	NA	ND	NA
	7-4-5 Dup	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	20	ND	ND	ND	60	NA	ND	340	ND	ND	ND	ND	NA	ND	NA
7-Am	7-Am	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	21	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA
7-Am Dup	7-Am Dup	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	11	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA
P20-VP-1	VP-1	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-2	VP-2	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-3	VP-3	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-4	VP-4	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
	VP-4 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-5	VP-5	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-6	VP-6	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-7	VP-7	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-8	VP-8	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P20-VP-9	VP-9	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
	VP-9 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-1	VP-1	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-2	VP-2	8/13/2015	5	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-3	VP-3	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-4	VP-4	8/13/2015	5	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-5	VP-5	8/13/2015	5	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-6	VP-6	8/13/2015	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
	VP-6 Dup	8/13/2015	5	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-7	VP-7	8/13/2015	5	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-8	VP-8	8/13/2015	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-9	VP-9	8/13/2015	5	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-10	VP-10	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-11	VP-11	8/13/2015	5	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
P22-VP-12	VP-12	8/13/2015	5	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE L-3

Soil Gas and Ambient Air Summary for PARC Area 7

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cyclohexane	Dichlorodifluoromethane	Ethanol
P23-SV1	SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV2	SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV3	SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV4	SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV5	SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV6	SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV7	SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV8	SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV9	SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV10	SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV11	SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV12	SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV13	SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-Am	Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
		# of non-detects =>	**20**	**6**	**5**	**5**	**6**	**6**	**0**	**3**	**6**	**6**	**6**	**3**	**0**	**22**	**3**	**6**	**6**	**4**	**6**	**0**	**6**	**0**
		# of detects =>	**10**	**0**	**1**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**8**	**3**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
		# of samples =>	**30**	**6**	**6**	**6**	**6**	**6**	**0**	**6**	**6**	**6**	**6**	**6**	**0**	**30**	**6**	**6**	**6**	**6**	**6**	**0**	**6**	**0**
		frequency of detection =>	**33%**	**0%**	**17%**	**17%**	**0%**	**0%**	**-**	**50%**	**0%**	**0%**	**0%**	**50%**	**-**	**27%**	**50%**	**0%**	**0%**	**33%**	**0%**	**-**	**0%**	**-**
		minimum detected =>	**2**	**-**	**40**	**120**	**-**	**-**	**-**	**11**	**-**	**-**	**-**	**21**	**-**	**2**	**28**	**-**	**-**	**17**	**-**	**-**	**-**	**-**
		maximum detected =>	**30**	**-**	**40**	**120**	**-**	**-**	**-**	**27**	**-**	**-**	**-**	**62**	**-**	**9**	**370**	**-**	**-**	**26**	**-**	**-**	**-**	**-**

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TABLE L-3

Soil Gas and Ambient Air Summary for PARC Area 7

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
7-1	7-1-5	5/16/2017	5	ND	ND	ND	ND	NA	ND	NA	430	11	ND	6400	ND	ND	NA	NA
7-3	7-3-5	5/16/2017	5	ND	ND	ND	ND	NA	ND	NA	550	ND	38	210000	ND	ND	NA	NA
7-4	7-4-5	5/16/2017	5	ND	150	ND	ND	NA	ND	NA	ND	23	ND	1400	ND	ND	NA	NA
	7-4-5 Dup	5/16/2017	5	ND	140	ND	ND	NA	ND	NA	ND	22	ND	1100	ND	ND	NA	NA
7-Am	7-Am	5/16/2017	Ambient	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
7-Am Dup	7-Am Dup	5/16/2017	Ambient	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
P20-VP-1	VP-1	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	310	ND	ND	NA	NA	ND	NA	120000
P20-VP-2	VP-2	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	270	ND	ND	NA	NA	ND	NA	21000
P20-VP-3	VP-3	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	390	ND	ND	NA	NA	ND	NA	27000
P20-VP-4	VP-4	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	1000	ND	20	NA	NA	ND	NA	6500
	VP-4 Dup	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	480	ND	ND	NA	NA	ND	NA	2000
P20-VP-5	VP-5	4/26/2016	3	ND	ND	NA	ND	NA	ND	NA	4700	ND	ND	NA	NA	ND	NA	7600
P20-VP-6	VP-6	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	1400	ND	ND	NA	NA	ND	NA	6400
P20-VP-7	VP-7	4/26/2016	3	ND	ND	NA	ND	NA	ND	NA	4300	ND	ND	NA	NA	ND	NA	7500
P20-VP-8	VP-8	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	2600	ND	ND	NA	NA	ND	NA	5800
P20-VP-9	VP-9	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	120	20	ND	NA	NA	ND	NA	2800
	VP-9 Dup	4/26/2016	5	ND	ND	NA	ND	NA	ND	NA	970	ND	ND	NA	NA	ND	NA	4300
P22-VP-1	VP-1	8/13/2015	5	2	10	NA	2	NA	2	NA	70	7	2	NA	NA	ND	NA	6100
P22-VP-2	VP-2	8/13/2015	5	3	20	NA	10	NA	5	NA	120	8	1	NA	NA	ND	NA	4900
P22-VP-3	VP-3	8/13/2015	5	ND	6	NA	ND	NA	ND	NA	80	3	ND	NA	NA	ND	NA	5600
P22-VP-4	VP-4	8/13/2015	5	3	30	NA	3	NA	6	NA	120	20	ND	NA	NA	ND	NA	5200
P22-VP-5	VP-5	8/13/2015	5	2	20	NA	5	NA	3	NA	6	10	ND	NA	NA	ND	NA	7700
P22-VP-6	VP-6	8/13/2015	5	ND	5	NA	ND	NA	ND	NA	230	3	ND	NA	NA	ND	NA	6500
	VP-6 Dup	8/13/2015	5	ND	5	NA	ND	NA	ND	NA	170	3	ND	NA	NA	ND	NA	5400
P22-VP-7	VP-7	8/13/2015	5	ND	6	NA	ND	NA	ND	NA	180	3	ND	NA	NA	ND	NA	5100
P22-VP-8	VP-8	8/13/2015	5	ND	6	NA	ND	NA	1	NA	160	4	ND	NA	NA	ND	NA	6100
P22-VP-9	VP-9	8/13/2015	5	1	10	NA	3	NA	3	NA	270	3	ND	NA	NA	ND	NA	5800
P22-VP-10	VP-10	8/13/2015	5	2	10	NA	ND	NA	2	NA	2	10	ND	NA	NA	ND	NA	3600
P22-VP-11	VP-11	8/13/2015	5	2	20	NA	ND	NA	4	NA	180	20	ND	NA	NA	ND	NA	9000
P22-VP-12	VP-12	8/13/2015	5	1	20	NA	2	NA	4	NA	120	5	ND	NA	NA	ND	NA	6200

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TABLE L-3

Soil Gas and Ambient Air Summary for PARC Area 7

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
P23-SV1	SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV2	SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV3	SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV4	SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV5	SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
	SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV6	SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV7	SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV8	SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV9	SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV10	SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV11	SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV12	SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV13	SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-Am	Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
		# of non-detects =>		**22**	**15**	**6**	**24**	**0**	**21**	**0**	**4**	**13**	**26**	**2**	**6**	**30**	**0**	**15**
		# of detects =>		**8**	**15**	**0**	**6**	**0**	**9**	**0**	**26**	**17**	**4**	**4**	**0**	**0**	**0**	**24**
		# of samples =>		**30**	**30**	**6**	**30**	**0**	**30**	**0**	**30**	**30**	**30**	**6**	**6**	**30**	**0**	**39**
		frequency of detection =>		**27%**	**50%**	**0%**	**20%**	**-**	**30%**	**-**	**87%**	**57%**	**13%**	**67%**	**0%**	**0%**	**-**	**62%**
		minimum detected =>		**1**	**5**	**-**	**2**	**-**	**1**	**-**	**2**	**3**	**1**	**1100**	**-**	**-**	**-**	**2000**
		maximum detected =>		**3**	**150**	**-**	**10**	**-**	**6**	**-**	**4700**	**23**	**38**	**210000**	**-**	**-**	**-**	**120000**

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TABLE L-4
Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis)*													Concentrations in Soil (dry weight basis)**												
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	VOCs (µg/kg)	4,4'-DDD (µg/kg)	4,4'-DDE (µg/kg)	4,4'-DDT (µg/kg)	alpha-BHC (µg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	VOCs (µg/kg)	4,4'-DDD (µg/kg)	4,4'-DDE (µg/kg)	4,4'-DDT (µg/kg)	alpha-BHC (µg/kg)
7-1	7-1-0.5	05/16/2017	0.5	110	4500	45	0.13	100	1	62	-	1	-	-	-	-	116	4759	48	0.14	106	1.1	66	-	1.1	-	-	-	-
	7-1-1.0	05/16/2017	1.0	120	700	69	0.22	270	1	120	-	1	3.4	5.9	6.1	2.5	127	740	73	0.23	286	1.1	127	-	1.1	3.6	6.2	6.5	2.6
	7-2-0.5	05/15/2017	0.5	93	8.3	27	0.18	57	1	10	-	1	1	1	1	1	98	8.8	29	0.19	60	1.1	11	-	1.1	1.1	1.1	1.1	1.1
	7-2-1.0	05/15/2017	1.0	35	3.1	1.1	0.1	17	-	-	-	-	-	-	-	-	37	3.3	1	0.11	18	-	-	-	-	-	-	-	-
7-2	7-2-3.0	05/15/2017	3.0	23	2.1	1	0.19	13	1	10	-	1	-	-	-	-	24	2.2	1	0.20	14	1.1	11	-	1.1	-	-	-	-
	7-2-5.0	05/15/2017	5.0	24	1	1	0.1	11	-	-	-	-	-	-	-	-	25	1.1	1	0.11	12	-	-	-	-	-	-	-	-
7-3	7-3-0.5	05/15/2017	0.5	110	39	51	0.17	93	-	-	-	-	-	-	-	-	116	41	54	0.18	98	-	-	-	-	-	-	-	-
	7-3-1.0	05/15/2017	1.0	77	11	33	0.11	44	1	10	-	1	1	1	1	1	81	12	35	0.12	47	1.1	11	-	1.1	1.1	1.1	1.1	1.1
	7-3-3.0	05/15/2017	3.0	61	6.8	7.0	0.1	32	-	-	-	-	-	-	-	-	65	7.2	7.4	0.11	34	-	-	-	-	-	-	-	-
	7-3-5.0	05/15/2017	5.0	34	3.1	1	0.1	15	1	10	-	1	-	-	-	-	36	3.3	1.1	0.11	16	1.1	11	-	1.1	-	-	-	-
7-4	7-4-0.5	05/15/2017	0.5	130	36	70	0.11	150	1	26	-	1	1	1	1	1	137	38	74	0.12	159	1.1	27	-	1.1	1.1	1.1	1.1	1.1
	7-4-1.0	05/15/2017	1.0	100	44	43	0.12	130	-	-	-	-	-	-	-	-	106	47	45	0.13	137	-	-	-	-	-	-	-	-
	7-4-3.0	05/15/2017	3.0	92	13	31	0.64	80	1	6300	-	1	-	-	-	-	97	14	33	0.68	85	1.1	6663	-	1.1	-	-	-	-
	7-4-5.0	05/15/2017	5.0	150	35	12	0.1	890	-	-	-	-	-	-	-	-	159	37	13	0.11	941	-	-	-	-	-	-	-	-
7-5	7-5-0.5	05/16/2017	0.5	95	9.7	4.5	0.1	39	-	-	-	-	-	-	-	-	100	10	4.8	0.11	41	-	-	-	-	-	-	-	-
	7-5-1.0	05/16/2017	1.0	95	10	3.0	0.1	38	1	10	-	1	1	1	1	1	100	11	3.2	0.11	40	1.1	11	-	1.1	1.1	1.1	1.1	1.1
	7-5-3.0	05/16/2017	3.0	120	18	3.5	0.1	46	-	-	-	-	-	-	-	-	127	19	3.7	0.11	49	-	-	-	-	-	-	-	-
	7-5-5.0	05/16/2017	5.0	31	2.7	1.0	0.1	16	1	10	-	1	-	-	-	-	33	2.9	1.1	0.11	17	1.1	11	-	1.1	-	-	-	-
7-6	7-6-0.5	05/16/2017	0.5	91	28	31	0.13	77	1	200	-	1	1	1	1	1	96	30	33	0.14	81	1.1	212	-	1.1	1.1	1.1	1.1	1.1
	7-6-1.0	05/16/2017	1.0	93	28	22	0.16	60	-	-	-	-	-	-	-	-	98	30	23	0.17	63	-	-	-	-	-	-	-	-
	7-6-3.0	05/16/2017	3.0	78	12	13	0.1	50	-	-	-	-	-	-	-	-	82	13	14	0.11	53	-	-	-	-	-	-	-	-
	7-6-5.0	05/16/2017	5.0	40	4.6	2.7	0.1	19	1	10	-	1	-	-	-	-	42	4.9	2.9	0.11	20	1.1	11	-	1.1	-	-	-	-
7-7	7-7-0.5	05/16/2017	0.5	110	13	3.7	0.1	41	-	-	-	-	-	-	-	-	116	14	3.9	0.11	43	-	-	-	-	-	-	-	-
	7-7-1.0	05/16/2017	1.0	130	9.6	2.3	0.1	47	-	-	-	-	1	1	1	1	137	10.2	2.4	0.11	50	-	-	-	-	1.1	1.1	1.1	1.1
	7-7-3.0	05/16/2017	3.0	26	2.2	1	0.1	13	1	10	-	1	-	-	-	-	27	2.3	1.1	0.11	14	1.1	11	-	1.1	-	-	-	-
	7-7-5.0	05/16/2017	5.0	17	1	1	0.1	12	1	470	-	1	-	-	-	-	18	1.1	1.1	0.11	13	1.1	497	-	1.1	-	-	-	-
L-2	L-2 @ 1'	02/1/2016	1.0	97	11	6.4	0.1	37	-	-	-	-	-	-	-	-	103	12	6.8	0.11	39	-	-	-	-	-	-	-	-
	L-2 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The Fehling Group, LLC

TABLE L-4
Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis)*													Concentrations in Soil (dry weight basis)**												
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	VOCs (µg/kg)	4,4'-DDD (µg/kg)	4,4'-DDE (µg/kg)	4,4'-DDT (µg/kg)	alpha-BHC (µg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Zinc (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	VOCs (µg/kg)	4,4'-DDD (µg/kg)	4,4'-DDE (µg/kg)	4,4'-DDT (µg/kg)	alpha-BHC (µg/kg)
L-3	L-3 @ 1'	02/1/2016	1.0	68	21	22	0.10	81	-	-	-	-	-	-	-	-	72	22	23	0.11	86	-	-	-	-	-	-	-	-
	L-3 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-3 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-4	L-4 @ 1'	02/1/2016	1.0	250	84	98	0.27	290	-	-	-	-	-	-	-	-	264	89	104	0.29	307	-	-	-	-	-	-	-	-
	L-4 @ 3'	02/1/2016	3.0	86	9.6	2.0	*0.1*	38	-	-	-	-	-	-	-	-	91	10.2	2.1	*0.11*	40	-	-	-	-	-	-	-	-
	L-4 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-2	L-2 @ 1'	02/26/2016	1.0	-	-	-	-	-	*1*	*10*	-	*1*	*1*	*1*	*1*	*1*	-	-	-	-	-	*1.1*	*11*	-	*1.1*	*1.1*	*1.1*	*1.1*	*1.1*
	L-2 @ 2'	02/26/2016	2.0	33	3.7	1.2	*0.1*	16	-	-	-	-	-	-	-	-	35	3.9	1.3	*0.11*	17	-	-	-	-	-	-	-	-
	L-2 @ 3'	02/26/2016	3.0	37	4.4	1.4	*0.1*	20	-	-	-	-	-	-	-	-	39	4.7	1.5	*0.11*	21	-	-	-	-	-	-	-	-
L-3	L-3 @ 1'	02/26/2016	1.0	-	-	-	-	-	*1*	18	-	*1*	*1*	*1*	2.9	*1*	-	-	-	-	-	*1.1*	19	-	*1.1*	*1.1*	*1.1*	3.1	*1.1*
	L-3 @ 2'	02/26/2016	2.0	88	9.5	2.3	*0.1*	41	-	-	-	-	-	-	-	-	93	10.0	2.4	*0.11*	43	-	-	-	-	-	-	-	-
	L-3 @ 3'	02/26/2016	3.0	89	9.8	2.4	*0.1*	41	-	-	-	-	-	-	-	-	94	10.4	2.5	*0.11*	43	-	-	-	-	-	-	-	-
L-4	L-4 @ 1'	02/26/2016	1.0	-	-	-	-	-	*1*	20	-	*1*	*1*	*1*	2.1	*1*	-	-	-	-	-	*1.1*	21	-	*1.1*	*1.1*	*1.1*	2.2	*1.1*
	L-4 @ 2'	02/26/2016	2.0	130	26	14	*0.1*	96	-	-	-	-	-	-	-	-	137	27	15	*0.11*	102	-	-	-	-	-	-	-	-
	L-4 @ 3'	02/26/2016	3.0	130	37	67	0.17	150	-	-	-	-	-	-	-	-	137	39	71	0.18	159	-	-	-	-	-	-	-	-
20-1	20-1-1	04/20/2016	1.0	172	74	240	1.2	170	5	5	25	various	-	-	-	-	182	78	254	1.29	180	5.3	5.3	26	various	-	-	-	-
A13-14	A14@10'	09/5/2013	10.0	46	6.8	*1*	0.036	26	*1*	*10*	*10*	*1*	-	-	-	-	49	7.2	*1.1*	0.04	27	*1.1*	*11*	*11*	*1.1*	-	-	-	-
A13-15	R15@5'	08/23/2013	5.0	50	34	18	0.074	58	*1*	*10*	*10*	*1*	-	-	-	-	53	36	19	0.08	61	*1.1*	*11*	*11*	*1.1*	-	-	-	-
				95% UCL for 0 to 10 ft bgs (see Attachment O)* =>													**105**	**693**	**58**	**0.317**	**340**	**1.7**	**1832**	**26**	**-**	**1.8**	**3.8**	**4.3**	**1.5**

* Italicized value is the reporting limit for 'non-detect' ('ND') result.

** Dry weight concentration = Wet weight concentration x (1 + average moisture content) where average moisture content = 0.056 g/g (see **Table 1**).

* 95% UCL not calculated due to low number of samples; value shown is maximum value. EPCs for various VOCs detected in single sample not established given extensive soil gas dataset.

The Fehling Group, LLC

TABLE L-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
7-1	7-1-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	2E-02	ND	ND	ND	5E-02	NA	6E-03	2E-02	ND	ND	ND	ND
7-3	7-3-5	5/16/2017	5	ND	ND	2E-02	8E-02	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	1E-02	ND
7-4	7-4-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	3E-01	ND	ND	2E-02	ND
	7-4-5 Dup	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	1E-02	ND	ND	ND	5E-02	NA	ND	3E-01	ND	ND	ND	ND
7-Am	7-Am	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	2E+01	NA	ND	ND	ND	ND	ND	ND
7-Am Dup	7-Am Dup	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	1E+01	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
P20-VP-1	VP-1	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-2	VP-2	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-3	VP-3	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-4	VP-4	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
	VP-4 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-5	VP-5	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-6	VP-6	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-7	VP-7	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-8	VP-8	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-9	VP-9	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
	VP-9 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-1	VP-1	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1E-03	NA	NA	NA	NA	NA
P22-VP-2	VP-2	8/13/2015	5	2E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1E-03	NA	NA	NA	NA	NA
P22-VP-3	VP-3	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-4	VP-4	8/13/2015	5	2E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2E-03	NA	NA	NA	NA	NA
P22-VP-5	VP-5	8/13/2015	5	2E-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3E-03	NA	NA	NA	NA	NA
P22-VP-6	VP-6	8/13/2015	5	3E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
	VP-6 Dup	8/13/2015	5	2E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-7	VP-7	8/13/2015	5	2E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-8	VP-8	8/13/2015	5	3E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1E-03	NA	NA	NA	NA	NA

The Fehling Group, LLC

TABLE L-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P22-VP-9	VP-9	8/13/2015	5	**2E-03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*
P22-VP-10	VP-10	8/13/2015	5	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**3E-03**	*NA*	*NA*	*NA*	*NA*	*NA*
P22-VP-11	VP-11	8/13/2015	5	**2E-03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**1E-03**	*NA*	*NA*	*NA*	*NA*	*NA*
P22-VP-12	VP-12	8/13/2015	5	**1E-03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV1	SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV2	SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV3	SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV4	SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV5	SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV6	SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV7	SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV8	SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV9	SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV10	SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV11	SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV12	SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV13	SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-Am	Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

The Fehling Group, LLC

TABLE L-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
7-1	7-1-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	2E-01	7E-03	ND	4E+00	ND	ND	NA	NA
7-3	7-3-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	2E-01	ND	2E-02	1E+02	ND	ND	NA	NA
7-4	7-4-5	5/16/2017	5	NA	ND	NA	ND	9E-02	ND	ND	NA	ND	NA	ND	1E-02	ND	8E-01	ND	ND	NA	NA
	7-4-5 Dup	5/16/2017	5	NA	ND	NA	ND	8E-02	ND	ND	NA	ND	NA	ND	1E-02	ND	6E-01	ND	ND	NA	NA
7-Am	7-Am	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
7-Am Dup	7-Am Dup	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
P20-VP-1	VP-1	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	1E-01	ND	ND	NA	NA	ND	NA	8E+01
P20-VP-2	VP-2	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	1E-01	ND	ND	NA	NA	ND	NA	1E+01
P20-VP-3	VP-3	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E-01	ND	ND	NA	NA	ND	NA	2E+01
P20-VP-4	VP-4	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	5E-01	ND	1E-02	NA	NA	ND	NA	5E+00
	VP-4 Dup	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E-01	ND	ND	NA	NA	ND	NA	1E+00
P20-VP-5	VP-5	4/26/2016	3	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E+00	ND	ND	NA	NA	ND	NA	5E+00
P20-VP-6	VP-6	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	6E-01	ND	ND	NA	NA	ND	NA	4E+00
P20-VP-7	VP-7	4/26/2016	3	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E+00	ND	ND	NA	NA	ND	NA	5E+00
P20-VP-8	VP-8	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	1E+00	ND	ND	NA	NA	ND	NA	4E+00
P20-VP-9	VP-9	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	5E-02	1E-02	ND	NA	NA	ND	NA	2E+00
	VP-9 Dup	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	4E-01	ND	ND	NA	NA	ND	NA	3E+00
P22-VP-1	VP-1	8/13/2015	5	NA	NA	NA	1E-03	6E-03	NA	1E-03	NA	1E-03	NA	3E-02	4E-03	1E-03	NA	NA	ND	NA	4E+00
P22-VP-2	VP-2	8/13/2015	5	NA	NA	NA	2E-03	1E-02	NA	5E-03	NA	3E-03	NA	5E-02	5E-03	6E-04	NA	NA	ND	NA	3E+00
P22-VP-3	VP-3	8/13/2015	5	NA	NA	NA	ND	3E-03	NA	ND	NA	ND	NA	4E-02	2E-03	ND	NA	NA	ND	NA	4E+00
P22-VP-4	VP-4	8/13/2015	5	NA	NA	NA	2E-03	2E-02	NA	2E-03	NA	3E-03	NA	5E-02	1E-02	ND	NA	NA	ND	NA	4E+00
P22-VP-5	VP-5	8/13/2015	5	NA	NA	NA	1E-03	1E-02	NA	3E-03	NA	2E-03	NA	3E-03	6E-03	ND	NA	NA	ND	NA	5E+00
P22-VP-6	VP-6	8/13/2015	5	NA	NA	NA	ND	3E-03	NA	ND	NA	ND	NA	1E-01	2E-03	ND	NA	NA	ND	NA	5E+00
	VP-6 Dup	8/13/2015	5	NA	NA	NA	ND	3E-03	NA	ND	NA	ND	NA	8E-02	2E-03	ND	NA	NA	ND	NA	4E+00
P22-VP-7	VP-7	8/13/2015	5	NA	NA	NA	ND	3E-03	NA	ND	NA	ND	NA	8E-02	2E-03	ND	NA	NA	ND	NA	4E+00
P22-VP-8	VP-8	8/13/2015	5	NA	NA	NA	ND	3E-03	NA	ND	NA	6E-04	NA	7E-02	3E-03	ND	NA	NA	ND	NA	4E+00

The Fehling Group, LLC

TABLE L-5a
Indoor Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
P22-VP-9	VP-9	8/13/2015	5	*NA*	*NA*	*NA*	**6E-04**	**6E-03**	*NA*	**2E-03**	*NA*	**2E-03**	*NA*	**1E-01**	**2E-03**	*ND*	*NA*	*NA*	*ND*	*NA*	**4E+00**
P22-VP-10	VP-10	8/13/2015	5	*NA*	*NA*	*NA*	**1E-03**	**6E-03**	*NA*	*ND*	*NA*	**1E-03**	*NA*	**9E-04**	**6E-03**	*ND*	*NA*	*NA*	*ND*	*NA*	**3E+00**
P22-VP-11	VP-11	8/13/2015	5	*NA*	*NA*	*NA*	**1E-03**	**1E-02**	*NA*	*ND*	*NA*	**2E-03**	*NA*	**8E-02**	**1E-02**	*ND*	*NA*	*NA*	*ND*	*NA*	**6E+00**
P22-VP-12	VP-12	8/13/2015	5	*NA*	*NA*	*NA*	**6E-04**	**1E-02**	*NA*	**1E-03**	*NA*	**2E-03**	*NA*	**5E-02**	**3E-03**	*ND*	*NA*	*NA*	*ND*	*NA*	**4E+00**
P23-SV1	SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV2	SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV3	SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV4	SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV5	SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
	SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV6	SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV7	SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV8	SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV9	SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV10	SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV11	SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV12	SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV13	SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-Am	Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*

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TABLE L-5b
Trench Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
7-1	7-1-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	7E-02	ND	ND	ND	2E-01	NA	2E-02	8E-02	ND	ND	ND	ND
7-3	7-3-5	5/16/2017	5	ND	ND	7E-02	3E-01	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	4E-02	ND
7-4	7-4-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	1E+00	ND	ND	5E-02	ND
	7-4-5 Dup	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	5E-02	ND	ND	ND	2E-01	NA	ND	1E+00	ND	ND	ND	ND
7-Am	7-Am	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	2E+01	NA	ND	ND	ND	ND	ND	ND
7-Am Dup	7-Am Dup	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	1E+01	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
P20-VP-1	VP-1	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-2	VP-2	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-3	VP-3	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-4	VP-4	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
	VP-4 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-5	VP-5	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-6	VP-6	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-7	VP-7	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-8	VP-8	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P20-VP-9	VP-9	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
	VP-9 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-1	VP-1	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5E-03	NA	NA	NA	NA	NA
P22-VP-2	VP-2	8/13/2015	5	5E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5E-03	NA	NA	NA	NA	NA
P22-VP-3	VP-3	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-4	VP-4	8/13/2015	5	5E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7E-03	NA	NA	NA	NA	NA
P22-VP-5	VP-5	8/13/2015	5	5E-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1E-02	NA	NA	NA	NA	NA
P22-VP-6	VP-6	8/13/2015	5	9E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
	VP-6 Dup	8/13/2015	5	7E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-7	VP-7	8/13/2015	5	5E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
P22-VP-8	VP-8	8/13/2015	5	9E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5E-03	NA	NA	NA	NA	NA

The Fehling Group, LLC

TABLE L-5b
Trench Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
P22-VP-9	VP-9	8/13/2015	5	**7E-03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*
P22-VP-10	VP-10	8/13/2015	5	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**1E-02**	*NA*	*NA*	*NA*	*NA*	*NA*
P22-VP-11	VP-11	8/13/2015	5	**5E-03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**5E-03**	*NA*	*NA*	*NA*	*NA*	*NA*
P22-VP-12	VP-12	8/13/2015	5	**3E-03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV1	SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV2	SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV3	SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV4	SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV5	SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV6	SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV7	SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV8	SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV9	SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV10	SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV11	SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV12	SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-SV13	SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
P23-Am	Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

The Fehling Group, LLC

TABLE L-5b
Trench Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
7-1	7-1-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	6E-01	2E-02	ND	1E+01	ND	ND	NA	NA
7-3	7-3-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	7E-01	ND	7E-02	4E+02	ND	ND	NA	NA
7-4	7-4-5	5/16/2017	5	NA	ND	NA	ND	3E-01	ND	ND	NA	ND	NA	ND	5E-02	ND	2E+00	ND	ND	NA	NA
	7-4-5 Dup	5/16/2017	5	NA	ND	NA	ND	3E-01	ND	ND	NA	ND	NA	ND	5E-02	ND	2E+00	ND	ND	NA	NA
7-Am	7-Am	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
7-Am Dup	7-Am Dup	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA
P20-VP-1	VP-1	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	4E-01	ND	ND	NA	NA	ND	NA	3E+02
P20-VP-2	VP-2	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	4E-01	ND	ND	NA	NA	ND	NA	5E+01
P20-VP-3	VP-3	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	5E-01	ND	ND	NA	NA	ND	NA	6E+01
P20-VP-4	VP-4	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	1E+00	ND	4E-02	NA	NA	ND	NA	2E+01
	VP-4 Dup	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	7E-01	ND	ND	NA	NA	ND	NA	5E+00
P20-VP-5	VP-5	4/26/2016	3	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	6E+00	ND	ND	NA	NA	ND	NA	2E+01
P20-VP-6	VP-6	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E+00	ND	ND	NA	NA	ND	NA	2E+01
P20-VP-7	VP-7	4/26/2016	3	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	6E+00	ND	ND	NA	NA	ND	NA	2E+01
P20-VP-8	VP-8	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	4E+00	ND	ND	NA	NA	ND	NA	1E+01
P20-VP-9	VP-9	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E-01	4E-02	ND	NA	NA	ND	NA	7E+00
	VP-9 Dup	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	1E+00	ND	ND	NA	NA	ND	NA	1E+01
P22-VP-1	VP-1	8/13/2015	5	NA	NA	NA	4E-03	2E-02	NA	3E-03	NA	4E-03	NA	9E-02	1E-02	4E-03	NA	NA	ND	NA	1E+01
P22-VP-2	VP-2	8/13/2015	5	NA	NA	NA	6E-03	4E-02	NA	2E-02	NA	9E-03	NA	2E-01	2E-02	2E-03	NA	NA	ND	NA	1E+01
P22-VP-3	VP-3	8/13/2015	5	NA	NA	NA	ND	1E-02	NA	ND	NA	ND	NA	1E-01	6E-03	ND	NA	NA	ND	NA	1E+01
P22-VP-4	VP-4	8/13/2015	5	NA	NA	NA	6E-03	6E-02	NA	5E-03	NA	1E-02	NA	2E-01	4E-02	ND	NA	NA	ND	NA	1E+01
P22-VP-5	VP-5	8/13/2015	5	NA	NA	NA	4E-03	4E-02	NA	8E-03	NA	6E-03	NA	8E-03	2E-02	ND	NA	NA	ND	NA	2E+01
P22-VP-6	VP-6	8/13/2015	5	NA	NA	NA	ND	9E-03	NA	ND	NA	ND	NA	3E-01	6E-03	ND	NA	NA	ND	NA	2E+01
	VP-6 Dup	8/13/2015	5	NA	NA	NA	ND	9E-03	NA	ND	NA	ND	NA	2E-01	6E-03	ND	NA	NA	ND	NA	1E+01
P22-VP-7	VP-7	8/13/2015	5	NA	NA	NA	ND	1E-02	NA	ND	NA	ND	NA	2E-01	6E-03	ND	NA	NA	ND	NA	1E+01
P22-VP-8	VP-8	8/13/2015	5	NA	NA	NA	ND	1E-02	NA	ND	NA	2E-03	NA	2E-01	8E-03	ND	NA	NA	ND	NA	1E+01

The Fehling Group, LLC

TABLE L-5b
Trench Air Exposure Point Concentrations and Ambient Air Concentrations (in μg/m^3)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
P22-VP-9	VP-9	8/13/2015	5	*NA*	*NA*	*NA*	**2E-03**	**2E-02**	*NA*	**5E-03**	*NA*	**6E-03**	*NA*	**4E-01**	**6E-03**	*ND*	*NA*	*NA*	*ND*	*NA*	**1E+01**
P22-VP-10	VP-10	8/13/2015	5	*NA*	*NA*	*NA*	**4E-03**	**2E-02**	*NA*	*ND*	*NA*	**4E-03**	*NA*	**3E-03**	**2E-02**	*ND*	*NA*	*NA*	*ND*	*NA*	**9E+00**
P22-VP-11	VP-11	8/13/2015	5	*NA*	*NA*	*NA*	**4E-03**	**4E-02**	*NA*	*ND*	*NA*	**7E-03**	*NA*	**2E-01**	**4E-02**	*ND*	*NA*	*NA*	*ND*	*NA*	**2E+01**
P22-VP-12	VP-12	8/13/2015	5	*NA*	*NA*	*NA*	**2E-03**	**4E-02**	*NA*	**3E-03**	*NA*	**7E-03**	*NA*	**2E-01**	**1E-02**	*ND*	*NA*	*NA*	*ND*	*NA*	**1E+01**
P23-SV1	SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV2	SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV3	SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV4	SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV5	SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
	SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV6	SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV7	SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV8	SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV9	SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV10	SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV11	SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV12	SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-SV13	SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*
P23-Am	Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*

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TABLE L-6
Soil Risk Characterization Summary
~ PARC Area 7 ~

		Soil RBC (mg/kg)*				Risk Values (Incremental Lifetime Cancer Risk [ILCR] and Hazard Quotient [HQ])			
		Residential Receptor		Construction Worker Receptor		Residential Receptor		Construction Worker Receptor	
Soil COPC	**Soil EPC (mg/kg, dry weight basis)**	**Cancer Endpoint**	**Noncancer Endpoint**	**Cancer Endpoint**	**Noncancer Endpoint**	**ILCR (unitless)**	**HQ (unitless)**	**ILCR (unitless)**	**HQ (unitless)**
Barium	105	--	1.50E+04	--	3.02E+03	--	7.0E-03	--	3.5E-02
Copper	693	--	3.10E+03	--	1.42E+04	--	2.2E-01	--	4.9E-02
Lead	58	Not applicable (see Section 3.2.1.2)							
Mercury	0.32	--	1.01E+00	--	4.36E+01	--	3.1E-01	--	7.3E-03
Zinc	340	--	2.30E+04	--	1.06E+05	--	1.5E-02	--	3.2E-03
TPH-GRO	1.7	--	8.20E+01	--	2.77E+03	--	2.1E-02	--	6.2E-04
TPH-DRO	1832	--	9.60E+01	--	8.85E+02	--	1.9E+01	--	2.1E+00
TPH-ORO	26	--	2.50E+03	--	3.24E+04	--	1.0E-02	--	8.0E-04
4,4'-DDD	0.002	2.30E+00	1.90E+00	8.11E+01	--	7.9E-10	9.5E-04	2.2E-11	--
4,4'-DDE	0.004	2.00E+00	2.30E+01	5.73E+01	--	1.9E-09	1.7E-04	6.7E-11	--
4,4'-DDT	0.004	1.90E+00	3.70E+01	5.73E+01	1.41E+02	2.3E-09	1.2E-04	7.6E-11	3.1E-05
alpha-BHC	0.002	8.60E-02	5.10E+02	--	--	1.8E-08	3.0E-06	--	--
		Cumulative Risk Values (ILCR and HI Values) =>				**2.3E-08**	**2.0E+01**	**1.7E-10**	**2.2E+00**

* "Combined" value listed in **Table 5** for the residential receptor and **Table 6** for the construction worker receptor.

TABLE L-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
7-1-5	5/16/2017	5		*ND*	*ND*				*NA*							7E-08				*ND*	
7-3-5	5/16/2017	5		*ND*	1E-07				*NA*							*ND*				9E-08	
7-4-5	5/16/2017	5		*ND*	*ND*				*NA*							*ND*				1E-07	
7-4-5 Dup	5/16/2017	5		*ND*	*ND*				*NA*							*ND*				*ND*	
7-Am	5/16/2017	Ambient		*ND*	*ND*				*NA*							*ND*				*ND*	
7-Am Dup	5/16/2017	Ambient		*ND*	*ND*				*NA*							*ND*				*ND*	
VP-1	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-2	4/26/2016	5	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC
VP-3	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-4	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-4 Dup	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-5	4/26/2016	3		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-6	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-7	4/26/2016	3		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-8	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-9	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-9 Dup	4/26/2016	5		*NA*	*NA*				-							*ND*				*NA*	
VP-1	8/13/2015	5		*NA*	*NA*				*NA*							1E-08				*NA*	
VP-2	8/13/2015	5		*NA*	*NA*				-							1E-08				*NA*	
VP-3	8/13/2015	5		*NA*	*NA*				-							*ND*				*NA*	
VP-4	8/13/2015	5		*NA*	*NA*				-							2E-08				*NA*	
VP-5	8/13/2015	5		*NA*	*NA*				-							3E-08				*NA*	
VP-6	8/13/2015	5		*NA*	*NA*				-							*ND*				*NA*	
VP-6 Dup	8/13/2015	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-7	8/13/2015	5		*NA*	*NA*				-							*ND*				*NA*	
VP-8	8/13/2015	5		*NA*	*NA*				-							1E-08				*NA*	

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TABLE L-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
VP-9	8/13/2015	5	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC
VP-10	8/13/2015	5		*NA*	*NA*				*NA*							3E-08				*NA*	
VP-11	8/13/2015	5		*NA*	*NA*				*NA*							1E-08				*NA*	
VP-12	8/13/2015	5		*NA*	*NA*				*NA*							*ND*				*NA*	
SV1	11/27/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV2	11/27/2013	5		*NA*	*NA*				-							*NA*				*NA*	
SV3	11/27/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV4	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV5	11/27/2013	5		*NA*	*NA*				-							*NA*				*NA*	
SV5 Dup	11/27/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV6	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV7	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV8	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV9	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV10	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV11	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV12	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV13	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
Ambient Air	11/27/2013	Ambient		*NA*	*NA*				*NA*							*NA*				*NA*	

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TABLE L-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
7-1-5	5/16/2017	5				*ND*		*ND*	*ND*				4E-07		*ND*			*ND*			5E-07
7-3-5	5/16/2017	5				*ND*		*ND*	*ND*				5E-07		5E-08			*ND*			8E-07
7-4-5	5/16/2017	5				*ND*		*ND*	*ND*				*ND*		*ND*			*ND*			1E-07
7-4-5 Dup	5/16/2017	5				*ND*		*ND*	*ND*				*ND*		*ND*			*ND*			0E+00
7-Am	5/16/2017	Ambient				*ND*		*ND*	*ND*				*ND*		*ND*			*ND*			0E+00
7-Am Dup	5/16/2017	Ambient				*ND*		*ND*	*ND*				*ND*		*ND*			*ND*			0E+00
VP-1	4/26/2016	5				*ND*		*NA*	*ND*				3E-07		*ND*			*ND*			3E-07
VP-2	4/26/2016	5				*ND*		*NA*	*ND*				3E-07		*ND*			*ND*			3E-07
VP-3	4/26/2016	5				*ND*		*NA*	*ND*				4E-07		*ND*			*ND*			4E-07
VP-4	4/26/2016	5				*ND*		*NA*	*ND*				1E-06		2E-08			*ND*			1E-06
VP-4 Dup	4/26/2016	5				*ND*		*NA*	*ND*				5E-07		*ND*			*ND*			5E-07
VP-5	4/26/2016	3				*ND*		*NA*	*ND*				5E-06		*ND*			*ND*			5E-06
VP-6	4/26/2016	5				*ND*		*NA*	*ND*				1E-06		*ND*			*ND*			1E-06
VP-7	4/26/2016	3				*ND*		*NA*	*ND*				4E-06		*ND*			*ND*			4E-06
VP-8	4/26/2016	5				*ND*		*NA*	*ND*				3E-06		*ND*			*ND*			3E-06
VP-9	4/26/2016	5				*ND*		*NA*	*ND*				1E-07		*ND*			*ND*			1E-07
VP-9 Dup	4/26/2016	5				*ND*		*NA*	*ND*				1E-06		*ND*			*ND*			1E-06
VP-1	8/13/2015	5				1E-09		*NA*	1E-08				7E-08		2E-09			*ND*			1E-07
VP-2	8/13/2015	5				2E-09		*NA*	6E-08				1E-07		1E-09			*ND*			2E-07
VP-3	8/13/2015	5				*ND*		*NA*	*ND*				8E-08		*ND*			*ND*			8E-08
VP-4	8/13/2015	5				2E-09		*NA*	2E-08				1E-07		*ND*			*ND*			2E-07
VP-5	8/13/2015	5				1E-09		*NA*	3E-08				6E-09		*ND*			*ND*			7E-08
VP-6	8/13/2015	5				*ND*		*NA*	*ND*				2E-07		*ND*			*ND*			2E-07
VP-6 Dup	8/13/2015	5				*ND*		*NA*	*ND*				2E-07		*ND*			*ND*			2E-07
VP-7	8/13/2015	5				*ND*		*NA*	*ND*				2E-07		*ND*			*ND*			2E-07
VP-8	8/13/2015	5				*ND*		*NA*	*ND*				2E-07		*ND*			*ND*			2E-07

NONCARCINOGENIC

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TABLE L-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
VP-9	8/13/2015	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	5E-10	NONCARCINOGENIC	NA	2E-08	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	3E-07	NONCARCINOGENIC	ND	NONCARCINOGENIC	NONCARCINOGENIC	ND	NONCARCINOGENIC	NONCARCINOGENIC	3E-07
VP-10	8/13/2015	5				1E-09		NA	ND				2E-09		ND			ND			3E-08
VP-11	8/13/2015	5				1E-09		NA	ND				2E-07		ND			ND			2E-07
VP-12	8/13/2015	5				5E-10		NA	1E-08				1E-07		ND			ND			1E-07
SV1	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV2	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV3	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV4	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV5	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV5 Dup	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV6	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV7	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV8	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV9	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV10	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV11	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV12	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV13	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
Ambient Air	11/27/2013	Ambient				NA		NA	NA				NA		NA			NA			0E+00

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TABLE L-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
7-1-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	4E-06	ND	ND	ND	2E-06	NA	2E-03	3E-05	ND	ND	ND	ND
7-3-5	5/16/2017	5	ND	ND	1E-01	1E-03	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	1E-04	ND
7-4-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	4E-04	ND	ND	2E-04	ND
7-4-5 Dup	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	3E-06	ND	ND	ND	2E-06	NA	ND	4E-04	ND	ND	ND	ND
7-Am	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	7E-04	NA	ND	ND	ND	ND	ND	ND
7-Am Dup	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	2E-03	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
VP-1	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-2	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-3	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-4	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-4 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-5	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-6	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-7	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-8	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-9	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-9 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-1	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA
VP-2	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA
VP-3	8/13/2015	5	ND	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-4	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	7E-04	NA	NA	NA	NA	NA
VP-5	8/13/2015	5	2E-05	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	9E-04	NA	NA	NA	NA	NA
VP-6	8/13/2015	5	3E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-6 Dup	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-7	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-8	8/13/2015	5	3E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA

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TABLE L-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
VP-9	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-10	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9E-04	NA	NA	NA	NA	NA
VP-11	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA
VP-12	8/13/2015	5	1E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
SV1	11/27/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV2	11/27/2013	5	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV3	11/27/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV4	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV5	11/27/2013	5	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV5 Dup	11/27/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV6	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV7	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV8	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV9	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV10	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV11	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV12	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV13	11/25/2013	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ambient Air	11/27/2013	Ambient	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE L-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
7-1-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	5E-03	2E-05	ND	3E-03	ND	ND	NA	NA	1E-02
7-3-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	6E-03	ND	1E-02	9E-02	ND	ND	NA	NA	2E-01
7-4-5	5/16/2017	5	NA	ND	NA	ND	9E-04	ND	ND	NA	ND	NA	ND	5E-05	ND	6E-04	ND	ND	NA	NA	2E-03
7-4-5 Dup	5/16/2017	5	NA	ND	NA	ND	8E-04	ND	ND	NA	ND	NA	ND	4E-05	ND	5E-04	ND	ND	NA	NA	2E-03
7-Am	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA	7E-04
7-Am Dup	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA	2E-03
VP-1	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	3E-03	ND	ND	NA	NA	ND	NA	3E+00	3E+00
VP-2	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	3E-03	ND	ND	NA	NA	ND	NA	5E-01	5E-01
VP-3	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	4E-03	ND	ND	NA	NA	ND	NA	6E-01	6E-01
VP-4	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	1E-02	ND	5E-03	NA	NA	ND	NA	1E-01	2E-01
VP-4 Dup	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	5E-03	ND	ND	NA	NA	ND	NA	5E-02	5E-02
VP-5	4/26/2016	3	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	5E-02	ND	ND	NA	NA	ND	NA	2E-01	2E-01
VP-6	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	2E-02	ND	ND	NA	NA	ND	NA	1E-01	2E-01
VP-7	4/26/2016	3	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	5E-02	ND	ND	NA	NA	ND	NA	2E-01	2E-01
VP-8	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	3E-02	ND	ND	NA	NA	ND	NA	1E-01	2E-01
VP-9	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	1E-03	4E-05	ND	NA	NA	ND	NA	6E-02	6E-02
VP-9 Dup	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	1E-02	ND	ND	NA	NA	ND	NA	1E-01	1E-01
VP-1	8/13/2015	5	NA	NA	-	1E-06	6E-05	NA	3E-04	NA	1E-05	NA	8E-04	1E-05	5E-04	NA	NA	ND	NA	1E-01	1E-01
VP-2	8/13/2015	5	NA	NA	-	2E-06	1E-04	NA	2E-03	NA	3E-05	NA	1E-03	2E-05	3E-04	NA	NA	ND	NA	1E-01	1E-01
VP-3	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	ND	NA	9E-04	6E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-4	8/13/2015	5	NA	NA	-	2E-06	2E-04	NA	5E-04	NA	3E-05	NA	1E-03	4E-05	ND	NA	NA	ND	NA	1E-01	1E-01
VP-5	8/13/2015	5	NA	NA	-	1E-06	1E-04	NA	8E-04	NA	2E-05	NA	7E-05	2E-05	ND	NA	NA	ND	NA	2E-01	2E-01
VP-6	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	ND	NA	2E-03	6E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-6 Dup	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	ND	NA	2E-03	6E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-7	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	ND	NA	2E-03	6E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-8	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	6E-06	NA	2E-03	8E-06	ND	NA	NA	ND	NA	1E-01	1E-01

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TABLE L-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
VP-9	8/13/2015	5	*NA*	*NA*	-	**6E-07**	**6E-05**	*NA*	**5E-04**	*NA*	**2E-05**	*NA*	**3E-03**	**6E-06**	*ND*	*NA*	*NA*	*ND*	*NA*	**1E-01**	**1E-01**
VP-10	8/13/2015	5	*NA*	*NA*	-	**1E-06**	**6E-05**	*NA*	*ND*	*NA*	**1E-05**	*NA*	**2E-05**	**2E-05**	*ND*	*NA*	*NA*	*ND*	*NA*	**8E-02**	**8E-02**
VP-11	8/13/2015	5	*NA*	*NA*	-	**1E-06**	**1E-04**	*NA*	*ND*	*NA*	**2E-05**	*NA*	**2E-03**	**4E-05**	*ND*	*NA*	*NA*	*ND*	*NA*	**2E-01**	**2E-01**
VP-12	8/13/2015	5	*NA*	*NA*	-	**6E-07**	**1E-04**	*NA*	**3E-04**	*NA*	**2E-05**	*NA*	**1E-03**	**1E-05**	*ND*	*NA*	*NA*	*ND*	*NA*	**1E-01**	**1E-01**
SV1	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV2	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV3	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV4	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV5	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV5 Dup	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV6	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV7	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV8	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV10	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV11	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV12	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
SV13	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**
Ambient Air	11/27/2013	Ambient	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	**0E+00**

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TABLE L-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
7-1-5	5/16/2017	5		*ND*	*ND*				*NA*							2E-09				*ND*	
7-3-5	5/16/2017	5		*ND*	4E-09				*NA*							*ND*				3E-09	
7-4-5	5/16/2017	5		*ND*	*ND*				*NA*							*ND*				4E-09	
7-4-5 Dup	5/16/2017	5		*ND*	*ND*				*NA*							*ND*				*ND*	
7-Am	5/16/2017	Ambient		*ND*	*ND*				*NA*							*ND*				*ND*	
7-Am Dup	5/16/2017	Ambient		*ND*	*ND*				*NA*							*ND*				*ND*	
VP-1	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-2	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-3	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-4	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-4 Dup	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-5	4/26/2016	3		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-6	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-7	4/26/2016	3		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-8	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-9	4/26/2016	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-9 Dup	4/26/2016	5		*NA*	*NA*				-							*ND*				*NA*	
VP-1	8/13/2015	5		*NA*	*NA*				*NA*							5E-10				*NA*	
VP-2	8/13/2015	5		*NA*	*NA*				-							5E-10				*NA*	
VP-3	8/13/2015	5		*NA*	*NA*				-							*ND*				*NA*	
VP-4	8/13/2015	5		*NA*	*NA*				-							7E-10				*NA*	
VP-5	8/13/2015	5		*NA*	*NA*				-							9E-10				*NA*	
VP-6	8/13/2015	5		*NA*	*NA*				-							*ND*				*NA*	
VP-6 Dup	8/13/2015	5		*NA*	*NA*				*NA*							*ND*				*NA*	
VP-7	8/13/2015	5		*NA*	*NA*				-							*ND*				*NA*	
VP-8	8/13/2015	5		*NA*	*NA*				-							5E-10				*NA*	

NONCARCINOGENIC

The Fehling Group, LLC

TABLE L-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
VP-9	8/13/2015	5	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*ND*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC
VP-10	8/13/2015	5		*NA*	*NA*				*NA*							9E-10				*NA*	
VP-11	8/13/2015	5		*NA*	*NA*				*NA*							5E-10				*NA*	
VP-12	8/13/2015	5		*NA*	*NA*				*NA*							*ND*				*NA*	
SV1	11/27/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV2	11/27/2013	5		*NA*	*NA*				-							*NA*				*NA*	
SV3	11/27/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV4	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV5	11/27/2013	5		*NA*	*NA*				-							*NA*				*NA*	
SV5 Dup	11/27/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV6	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV7	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV8	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV9	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV10	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV11	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV12	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
SV13	11/25/2013	5		*NA*	*NA*				*NA*							*NA*				*NA*	
Ambient Air	11/27/2013	Ambient		*NA*	*NA*				*NA*							*NA*				*NA*	

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TABLE L-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
7-1-5	5/16/2017	5				ND		ND	ND				1E-08		ND			ND			1E-08
7-3-5	5/16/2017	5				ND		ND	ND				1E-08		9E-10			ND			2E-08
7-4-5	5/16/2017	5				ND		ND	ND				ND		ND			ND			4E-09
7-4-5 Dup	5/16/2017	5				ND		ND	ND				ND		ND			ND			0E+00
7-Am	5/16/2017	Ambient				ND		ND	ND				ND		ND			ND			0E+00
7-Am Dup	5/16/2017	Ambient				ND		ND	ND				ND		ND			ND			0E+00
VP-1	4/26/2016	5				ND		NA	ND				8E-09		ND			ND			8E-09
VP-2	4/26/2016	5				ND		NA	ND				7E-09		ND			ND			7E-09
VP-3	4/26/2016	5				ND		NA	ND				1E-08		ND			ND			1E-08
VP-4	4/26/2016	5				ND		NA	ND				3E-08		5E-10			ND			3E-08
VP-4 Dup	4/26/2016	5				ND		NA	ND				1E-08		ND			ND			1E-08
VP-5	4/26/2016	3				ND		NA	ND				1E-07		ND			ND			1E-07
VP-6	4/26/2016	5				ND		NA	ND				4E-08		ND			ND			4E-08
VP-7	4/26/2016	3				ND		NA	ND				1E-07		ND			ND			1E-07
VP-8	4/26/2016	5				ND		NA	ND				7E-08		ND			ND			7E-08
VP-9	4/26/2016	5				ND		NA	ND				3E-09		ND			ND			3E-09
VP-9 Dup	4/26/2016	5				ND		NA	ND				3E-08		ND			ND			3E-08
VP-1	8/13/2015	5				3E-11		NA	4E-10				2E-09		5E-11			ND			3E-09
VP-2	8/13/2015	5				5E-11		NA	2E-09				3E-09		2E-11			ND			6E-09
VP-3	8/13/2015	5				ND		NA	ND				2E-09		ND			ND			2E-09
VP-4	8/13/2015	5				5E-11		NA	5E-10				3E-09		ND			ND			5E-09
VP-5	8/13/2015	5				3E-11		NA	9E-10				2E-10		ND			ND			2E-09
VP-6	8/13/2015	5				ND		NA	ND				6E-09		ND			ND			6E-09
VP-6 Dup	8/13/2015	5				ND		NA	ND				5E-09		ND			ND			5E-09
VP-7	8/13/2015	5				ND		NA	ND				5E-09		ND			ND			5E-09
VP-8	8/13/2015	5				ND		NA	ND				4E-09		ND			ND			5E-09

NONCARCINOGENIC

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TABLE L-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
VP-9	8/13/2015	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	2E-11	NONCARCINOGENIC	NA	5E-10	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	7E-09	NONCARCINOGENIC	ND	NONCARCINOGENIC	NONCARCINOGENIC	ND	NONCARCINOGENIC	NONCARCINOGENIC	8E-09
VP-10	8/13/2015	5				3E-11		NA	ND				5E-11		ND			ND			1E-09
VP-11	8/13/2015	5				3E-11		NA	ND				5E-09		ND			ND			5E-09
VP-12	8/13/2015	5				2E-11		NA	4E-10				3E-09		ND			ND			4E-09
SV1	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV2	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV3	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV4	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV5	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV5 Dup	11/27/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV6	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV7	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV8	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV9	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV10	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV11	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV12	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
SV13	11/25/2013	5				NA		NA	NA				NA		NA			NA			0E+00
Ambient Air	11/27/2013	Ambient				NA		NA	NA				NA		NA			NA			0E+00

The Fehling Group, LLC

TABLE L-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
7-1-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	3E-06	ND	ND	ND	1E-06	NA	2E-03	3E-05	ND	ND	ND	ND
7-3-5	5/16/2017	5	ND	ND	9E-02	9E-04	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	9E-05	ND
7-4-5	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	4E-04	ND	ND	1E-04	ND
7-4-5 Dup	5/16/2017	5	ND	ND	ND	ND	ND	ND	NA	2E-06	ND	ND	ND	1E-06	NA	ND	3E-04	ND	ND	ND	ND
7-Am	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	2E-04	NA	ND	ND	ND	ND	ND	ND
7-Am Dup	5/16/2017	Ambient	ND	ND	ND	ND	ND	ND	NA	5E-04	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
VP-1	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-2	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-3	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-4	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-4 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-5	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-6	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-7	4/26/2016	3	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-8	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-9	4/26/2016	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-9 Dup	4/26/2016	5	ND	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-1	8/13/2015	5	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA
VP-2	8/13/2015	5	1E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA
VP-3	8/13/2015	5	ND	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-4	8/13/2015	5	1E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	6E-04	NA	NA	NA	NA	NA
VP-5	8/13/2015	5	1E-05	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	8E-04	NA	NA	NA	NA	NA
VP-6	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-6 Dup	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-7	8/13/2015	5	1E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
VP-8	8/13/2015	5	2E-06	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	NA	4E-04	NA	NA	NA	NA	NA

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TABLE L-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
VP-9	8/13/2015	5	**2E-06**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*
VP-10	8/13/2015	5	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**8E-04**	*NA*	*NA*	*NA*	*NA*	*NA*
VP-11	8/13/2015	5	**1E-06**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**4E-04**	*NA*	*NA*	*NA*	*NA*	*NA*
VP-12	8/13/2015	5	**8E-07**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*
SV1	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV2	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV3	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV4	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV5	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV5 Dup	11/27/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV6	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV7	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV8	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV10	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV11	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV12	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
SV13	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Ambient Air	11/27/2013	Ambient	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

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TABLE L-7d

Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
7-1-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	3E-03	2E-05	ND	2E-03	ND	ND	NA	NA	7E-03
7-3-5	5/16/2017	5	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	4E-03	ND	8E-03	7E-02	ND	ND	NA	NA	2E-01
7-4-5	5/16/2017	5	NA	ND	NA	ND	7E-04	ND	ND	NA	ND	NA	ND	4E-05	ND	5E-04	ND	ND	NA	NA	2E-03
7-4-5 Dup	5/16/2017	5	NA	ND	NA	ND	6E-04	ND	ND	NA	ND	NA	ND	4E-05	ND	4E-04	ND	ND	NA	NA	1E-03
7-Am	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA	2E-04
7-Am Dup	5/16/2017	Ambient	NA	ND	NA	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	NA	NA	5E-04
VP-1	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	3E-03	ND	ND	NA	NA	ND	NA	2E+00	2E+00
VP-2	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	2E-03	ND	ND	NA	NA	ND	NA	4E-01	4E-01
VP-3	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	3E-03	ND	ND	NA	NA	ND	NA	5E-01	5E-01
VP-4	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	8E-03	ND	4E-03	NA	NA	ND	NA	1E-01	1E-01
VP-4 Dup	4/26/2016	5	NA	NA	NA	ND	ND	NA	ND	NA	ND	NA	4E-03	ND	ND	NA	NA	ND	NA	4E-02	4E-02
VP-5	4/26/2016	3	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	4E-02	ND	ND	NA	NA	ND	NA	1E-01	2E-01
VP-6	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	1E-02	ND	ND	NA	NA	ND	NA	1E-01	1E-01
VP-7	4/26/2016	3	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	3E-02	ND	ND	NA	NA	ND	NA	1E-01	2E-01
VP-8	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	2E-02	ND	ND	NA	NA	ND	NA	1E-01	1E-01
VP-9	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	1E-03	3E-05	ND	NA	NA	ND	NA	5E-02	5E-02
VP-9 Dup	4/26/2016	5	NA	NA	-	ND	ND	NA	ND	NA	ND	NA	8E-03	ND	ND	NA	NA	ND	NA	8E-02	9E-02
VP-1	8/13/2015	5	NA	NA	-	9E-07	4E-05	NA	3E-04	NA	9E-06	NA	6E-04	1E-05	4E-04	NA	NA	ND	NA	1E-01	1E-01
VP-2	8/13/2015	5	NA	NA	-	1E-06	9E-05	NA	1E-03	NA	2E-05	NA	1E-03	1E-05	2E-04	NA	NA	ND	NA	9E-02	1E-01
VP-3	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	ND	NA	6E-04	5E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-4	8/13/2015	5	NA	NA	-	1E-06	1E-04	NA	4E-04	NA	3E-05	NA	1E-03	3E-05	ND	NA	NA	ND	NA	1E-01	1E-01
VP-5	8/13/2015	5	NA	NA	-	9E-07	9E-05	NA	6E-04	NA	1E-05	NA	5E-05	2E-05	ND	NA	NA	ND	NA	1E-01	1E-01
VP-6	8/13/2015	5	NA	NA	-	ND	2E-05	NA	ND	NA	ND	NA	2E-03	5E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-6 Dup	8/13/2015	5	NA	NA	-	ND	2E-05	NA	ND	NA	ND	NA	1E-03	5E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-7	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	ND	NA	1E-03	5E-06	ND	NA	NA	ND	NA	1E-01	1E-01
VP-8	8/13/2015	5	NA	NA	-	ND	3E-05	NA	ND	NA	4E-06	NA	1E-03	7E-06	ND	NA	NA	ND	NA	1E-01	1E-01

The Fehling Group, LLC

TABLE L-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
VP-9	8/13/2015	5	*NA*	*NA*	-	4E-07	4E-05	*NA*	4E-04	*NA*	1E-05	*NA*	2E-03	5E-06	*ND*	*NA*	*NA*	*ND*	*NA*	1E-01	1E-01
VP-10	8/13/2015	5	*NA*	*NA*	-	9E-07	4E-05	*NA*	*ND*	*NA*	9E-06	*NA*	2E-05	2E-05	*ND*	*NA*	*NA*	*ND*	*NA*	7E-02	7E-02
VP-11	8/13/2015	5	*NA*	*NA*	-	9E-07	9E-05	*NA*	*ND*	*NA*	2E-05	*NA*	1E-03	3E-05	*ND*	*NA*	*NA*	*ND*	*NA*	2E-01	2E-01
VP-12	8/13/2015	5	*NA*	*NA*	-	4E-07	9E-05	*NA*	3E-04	*NA*	2E-05	*NA*	1E-03	8E-06	*ND*	*NA*	*NA*	*ND*	*NA*	1E-01	1E-01
SV1	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV2	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV3	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV4	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV5	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV5 Dup	11/27/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV6	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV7	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV8	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV9	11/25/2013	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV10	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV11	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV12	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
SV13	11/25/2013	5	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00
Ambient Air	11/27/2013	Ambient	*NA*	*NA*	-	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	0E+00

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ATTACHMENT M

Tables for PARC Area 8

TABLE M-1

Soil Summary for PARC Area 8 - Metals (0 to 10 ft bgs)

~ in units of mg/kg (wet weight basis) ~

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
8-1	8-1-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-	250	-	-	-	-	-	-	-	-
	8-1-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-	130	-	-	-	-	-	-	-	-
	8-1-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-
	8-1-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-
8-2	8-2-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-
	8-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-	3.3	-	-	-	-	-	-	-	-
	8-2-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-	9.3	-	-	-	-	-	-	-	-
	8-2-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-
8-3	8-3-0.5	05/16/2017	0.5	*ND*	2.4	110	*ND*	*ND*	12	-	6.9	140	49	*ND*	*ND*	9.6	*ND*	*ND*	*ND*	28	120
	8-3-1.0	05/16/2017	1.0	*ND*	1.5	70	*ND*	*ND*	7.3	-	4.9	34	35	*ND*	*ND*	7.4	*ND*	*ND*	*ND*	21	65
	8-3-3.0	05/16/2017	3.0	*ND*	2.6	110	*ND*	1.70	11	-	6.0	41	65	0.11	*ND*	12	1.2	*ND*	*ND*	23	210
	8-3-5.0	05/16/2017	5.0	*ND*	2.3	68	*ND*	*ND*	22	*ND*	12	23	5.9	0.14	*ND*	20	*ND*	*ND*	*ND*	44	52
L-1	L-1 @ 1'	02/1/2016	1.0	8.9	4.3	530	*ND*	*ND*	15	-	7.4	85	310	*ND*	*ND*	13	*ND*	*ND*	*ND*	32	870
	L-1 @ 3'	02/1/2016	3.0	*ND*	2.9	120	*ND*	*ND*	14	-	7.8	19	4.6	0.20	*ND*	9.6	*ND*	*ND*	*ND*	29	50
	L-1 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-1	L-1 @ 1'	02/26/2016	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	L-1 @ 2'	02/26/2016	2.0	*ND*	2.3	140	*ND*	*ND*	12	-	6.8	20	20	*ND*	*ND*	9.6	*ND*	*ND*	*ND*	29	99
	L-1 @ 3'	02/26/2016	3.0	*ND*	2.6	160	*ND*	*ND*	12	-	6.7	20	18	0.11	*ND*	10	*ND*	*ND*	*ND*	28	87
A-13-17	A17@5'	11/16/2013	5.0	*ND*	2.0	84	*ND*	1.4	7.1	-	3.6	7.4	*ND*	0.03	*ND*	5.2	*ND*	*ND*	*ND*	23	27
	A17@10'	11/16/2013	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	# of non-detects =>			**8**	**0**	**0**	**9**	**7**	**0**	**1**	**0**	**0**	**1**	**4**	**9**	**0**	**8**	**9**	**9**	**0**	**0**
	# of detects =>			**1**	**9**	**9**	**0**	**2**	**9**	**0**	**9**	**9**	**16**	**5**	**0**	**9**	**1**	**0**	**0**	**9**	**9**
	# of samples =>			**9**	**9**	**9**	**9**	**9**	**9**	**1**	**9**	**9**	**17**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**9**
	frequency of detection =>			**11%**	**100%**	**100%**	**0%**	**22%**	**100%**	**0%**	**100%**	**100%**	**94%**	**56%**	**0%**	**100%**	**11%**	**0%**	**0%**	**100%**	**100%**
	minimum detected =>			**8.9**	**1.5**	**68**	**-**	**1.4**	**7.1**	**-**	**3.6**	**7.4**	**2.8**	**0.03**	**-**	**5.2**	**1.2**	**-**	**-**	**21**	**27**
	maximum detected =>			**8.9**	**4.3**	**530**	**-**	**1.7**	**22**	**-**	**12**	**140**	**310**	**0.2**	**-**	**20**	**1.2**	**-**	**-**	**44**	**870**

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TABLE M-2

Soil Summary for PARC Area 8 - TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, and Chlorinated Herbicides (wet weight basis)

(0 to 10 ft bgs)

Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)	PCBs (µg/kg)	OCPs (µg/kg)	OPPs (µg/kg)	Chlorinated Herbicides (µg/kg)
8-1	8-1-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-
	8-1-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-
	8-1-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-
	8-1-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-
8-2	8-2-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-
	8-2-1.0	05/16/2017	1.0	-	-	-	-	-	-	-	-	-
	8-2-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-
	8-2-5.0	05/16/2017	5.0	-	-	-	-	-	-	-	-	-
8-3	8-3-0.5	05/16/2017	0.5	-	-	-	-	-	-	-	-	-
	8-3-1.0	05/16/2017	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	*ND*
	8-3-3.0	05/16/2017	3.0	-	-	-	-	-	-	-	-	-
	8-3-5.0	05/16/2017	5.0	*ND*	*ND*	-	*ND*	*ND*	-	-	-	-
L-1	L-1 @ 1'	02/1/2016	1.0	-	-	-	-	-	-	-	-	-
	L-1 @ 3'	02/1/2016	3.0	-	-	-	-	-	-	-	-	-
	L-1 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-
	L-1 @ 1'	02/26/2016	1.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	-
L-1	L-1 @ 2'	02/26/2016	2.0	-	-	-	-	-	-	-	-	-
	L-1 @ 3'	02/26/2016	3.0	*ND*	*ND*	-	*ND*	*ND*	*ND*	*ND*	-	-
	A17@5'	11/16/2013	5.0	**1.2**	*ND*	*ND*	*ND*	-	-	-	-	-
A-13-17	A17@10'	11/16/2013	10.0	-	-	-	*ND*	-	-	-	-	-
			# of non-detects =>	**4**	**5**	**1**	**6**	**4**	**3**	**3**	**0**	**1**
			# of detects =>	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
			# of samples =>	**5**	**5**	**1**	**6**	**4**	**3**	**3**	**0**	**1**
			frequency of detection =>	**20%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**-**	**0%**
			minimum detected =>	**1.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
			maximum detected =>	**1.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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TABLE M-3

Soil Gas and Ambient Air Summary for PARC Area 8

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3	8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3	8-3 Dup	5/16/2017	5	**81**	**9.9**	*ND*	*ND*	*ND*	*ND*	*NA*	**27**	*ND*	*ND*	*ND*	**67**	*NA*	**22**	**150**	*ND*	*ND*	*ND*	*ND*
			# of non-detects =>	**0**	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**1**
			# of detects =>	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**
			# of samples =>	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**
			frequency of detection =>	**100%**	**100%**	**0%**	**0%**	**0%**	**0%**	**-**	**100%**	**0%**	**0%**	**0%**	**100%**	**-**	**100%**	**100%**	**0%**	**0%**	**0%**	**0%**
			minimum detected =>	**81**	**9.9**	**-**	**-**	**-**	**-**	**-**	**27**	**-**	**-**	**-**	**67**	**-**	**22**	**150**	**-**	**-**	**-**	**-**
			maximum detected =>	**81**	**10**	**-**	**-**	**-**	**-**	**-**	**27**	**-**	**-**	**-**	**67**	**-**	**22**	**150**	**-**	**-**	**-**	**-**

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TABLE M-3

Soil Gas and Ambient Air Summary for PARC Area 8

VOCs and TPH-GRO (detected analytes only)

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
8-3	8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3	8-3 Dup	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	**27**	*ND*	*ND*	*NA*	**11**	*NA*	**2000**	**20**	**60**	**32**	*ND*	*ND*	*NA*	*NA*
			# of non-detects =>	**0**	**1**	**0**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**
			# of detects =>	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**
			# of samples =>	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**
			frequency of detection =>	**-**	**0%**	**-**	**0%**	**100%**	**0%**	**0%**	**-**	**100%**	**-**	**100%**	**100%**	**100%**	**100%**	**0%**	**0%**	**-**	**-**
			minimum detected =>	**-**	**-**	**-**	**-**	**27**	**-**	**-**	**-**	**11**	**-**	**2000**	**20**	**60**	**32**	**-**	**-**	**-**	**-**
			maximum detected =>	**-**	**-**	**-**	**-**	**27**	**-**	**-**	**-**	**11**	**-**	**2000**	**20**	**60**	**32**	**-**	**-**	**-**	**-**

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TABLE M-4
Soil EPCs (0 to 10 ft bgs)

				Concentrations in Soil (wet weight basis, mg/kg)*					Concentrations in Soil (dry weight basis, mg/kg)**				
Boring ID	Sample ID	Sample Collection Date	Sample Depth (ft bgs)	Barium	Copper	Lead	Zinc	TPH-GRO	Barium	Copper	Lead	Zinc	TPH-GRO
8-1	8-1-0.5	05/16/2017	0.5	-	-	250	-	-	-	-	264	-	-
	8-1-1.0	05/16/2017	1.0	-	-	130	-	-	-	-	137	-	-
	8-1-3.0	05/16/2017	3.0	-	-	3.6	-	-	-	-	3.8	-	-
	8-1-5.0	05/16/2017	5.0	-	-	2.8	-	-	-	-	3.0	-	-
8-2	8-2-0.5	05/16/2017	0.5	-	-	44	-	-	-	-	47	-	-
	8-2-1.0	05/16/2017	1.0	-	-	3.3	-	-	-	-	3.5	-	-
	8-2-3.0	05/16/2017	3.0	-	-	9.3	-	-	-	-	10	-	-
	8-2-5.0	05/16/2017	5.0	-	-	37	-	-	-	-	39	-	-
8-3	8-3-0.5	05/16/2017	0.5	110	140	49	120	-	116	148	52	127	-
	8-3-1.0	05/16/2017	1.0	70	34	35	65	*1*	74	36	37	69	*1.1*
	8-3-3.0	05/16/2017	3.0	110	41	65	210	-	116	43	69	222	-
	8-3-5.0	05/16/2017	5.0	68	23	5.9	52	*1*	72	24	6.2	55	*1.1*
L-1	L-1 @ 1'	02/1/2016	1.0	530	85	310	870	-	561	90	328	920	-
	L-1 @ 3'	02/1/2016	3.0	120	19	4.6	50	-	127	20	4.9	53	-
	L-1 @ 5'	02/1/2016	5.0	-	-	-	-	-	-	-	-	-	-
L-1	L-1 @ 1'	02/26/2016	1.0	-	-	-	-	*1*	-	-	-	-	*1.1*
	L-1 @ 2'	02/26/2016	2.0	140	20	20	99	-	148	21	21	105	-
	L-1 @ 3'	02/26/2016	3.0	160	20	18	87	*1*	169	21	19	92	*1.1*
A-13-17	A17@5'	11/16/2013	5.0	84	7.4	*1*	27	1.2	89	7.8	*1.1*	29	1.3
	A17@10'	11/16/2013	10.0	-	-	-	-	-	-	-	-	-	-
			95% UCL for 0 to 10 ft bgs (see Attachment O)* =>						**385**	**97**	**130**	**483**	**1.3**

* Italicized value is the reporting limit for 'non-detect' ('ND') result.

* 95% UCL not calculated due to low number of samples; value shown is maximum value.

** Dry weight concentration = Wet weight concentration x (1 + average moisture content)
where average moisture content = 0.056 g/g (see **Table 1**).

The Fehling Group, LLC

TABLE M-5a

Indoor Air Exposure Point Concentrations (in μg/m^3)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3	8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3	8-3 Dup	5/16/2017	5	**4E-02**	**7E-03**	*ND*	*ND*	*ND*	*ND*	*NA*	**2E-02**	*ND*	*ND*	*ND*	**5E-02**	*NA*	**2E-02**	**1E-01**	*ND*	*ND*	*ND*	*ND*

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TABLE M-5a

Indoor Air Exposure Point Concentrations (in μg/m^3)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
8-3	8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3	8-3 Dup	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	**2E-02**	*ND*	*ND*	*NA*	**6E-03**	*NA*	**9E-01**	**1E-02**	**3E-02**	**2E-02**	*ND*	*ND*	*NA*	*NA*

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TABLE M-5b

Trench Air Exposure Point Concentrations (in μg/m^3)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3	8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3	8-3 Dup	5/16/2017	5	**4E-02**	**7E-03**	*ND*	*ND*	*ND*	*ND*	*NA*	**2E-02**	*ND*	*ND*	*ND*	**5E-02**	*NA*	**2E-02**	**1E-01**	*ND*	*ND*	*ND*	*ND*

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TABLE M-5b

Trench Air Exposure Point Concentrations (in μg/m^3)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	DateCollected	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics
8-3	8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3	8-3 Dup	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	**2E-02**	*ND*	*ND*	*NA*	**6E-03**	*NA*	**9E-01**	**1E-02**	**3E-02**	**2E-02**	*ND*	*ND*	*NA*	*NA*

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TABLE M-6
Soil Risk Characterization Summary
~ PARC Area 8 ~

		Soil RBC (mg/kg)*				Risk Values (Incremental Lifetime Cancer Risk [ILCR] and Hazard Quotient [HQ])			
		Residential Receptor		Construction Worker Receptor		Residential Receptor		Construction Worker Receptor	
Soil COPC	**Soil EPC (mg/kg, dry weight basis)**	**Cancer Endpoint**	**Noncancer Endpoint**	**Cancer Endpoint**	**Noncancer Endpoint**	**ILCR (unitless)**	**HQ (unitless)**	**ILCR (unitless)**	**HQ (unitless)**
Barium	385	--	1.50E+04	--	3.02E+03	--	2.6E-02	--	1.3E-01
Copper	97	--	3.10E+03	--	1.42E+04	--	3.1E-02	--	6.8E-03
Lead	130	Not applicable (see Section 3.2.1.2)							
Zinc	483	--	2.30E+04	--	1.06E+05	--	2.1E-02	--	4.6E-03
TPH-GRO	1.3	--	8.20E+01	--	2.77E+03	--	1.5E-02	--	4.6E-04
		Cumulative Risk Values (ILCR and HI Values) =>				**0.0E+00**	**9.3E-02**	**0.0E+00**	**1.4E-01**

* "Combined" value listed in **Table 5** for the residential receptor and **Table 6** for the construction worker receptor.

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TABLE M-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3-5	5/16/2017	5	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC
8-3 Dup	5/16/2017	5		**4E-09**	*ND*				*NA*							**2E-07**				*ND*	

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TABLE M-7a

Indoor Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
8-3-5	5/16/2017	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	**0E+00**
8-3 Dup	5/16/2017	5				*ND*		*ND*	*ND*				**2E-06**		**7E-08**			*ND*			**2E-06**

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TABLE M-7b
Indoor Air Hazard Quotients (gray-shaded values)
and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3 Dup	5/16/2017	5	**4E-05**	**8E-06**	**ND**	**ND**	*ND*	*ND*	*NA*	**4E-06**	*ND*	*ND*	*ND*	**2E-06**	*NA*	**5E-03**	**2E-04**	*ND*	*ND*	**ND**	*ND*

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TABLE M-7b
Indoor Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Residential Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0E+00**
8-3 Dup	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	**2E-04**	*ND*	*ND*	*NA*	**6E-05**	*NA*	**2E-02**	**4E-05**	**2E-02**	**1E-05**	*ND*	*ND*	*NA*	*NA*	**4E-02**

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TABLE M-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3-5	5/16/2017	5	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC
8-3 Dup	5/16/2017	5		**3E-11**	*ND*				*NA*							**1E-09**				*ND*	

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TABLE M-7c

Trench Air Incremental Lifetime Cancer Risk (gray-shaded values)

and Cumulative Incremental Lifetime Cancer Risk Values (blue-shaded values)

~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	ILCR
8-3-5	5/16/2017	5	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	*NA*	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	*NA*	NONCARCINOGENIC	NONCARCINOGENIC	**0E+00**
8-3 Dup	5/16/2017	5				*ND*		*ND*	*ND*				**2E-08**		**5E-10**			*ND*			**2E-08**

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TABLE M-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	2,2,4-Trimethylpentane	2-Butanone	2-Hexanone	4-Ethyl Toluene	4-Methyl-2-pentanone	Acetone	Acetonitrile	Benzene	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8-3 Dup	5/16/2017	5	**1E-05**	**2E-06**	**ND**	**ND**	*ND*	*ND*	*NA*	**9E-07**	*ND*	*ND*	*ND*	**4E-07**	*NA*	**1E-03**	**4E-05**	*ND*	*ND*	**ND**	*ND*

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TABLE M-7d
Trench Air Hazard Quotients (gray-shaded values) and Hazard Index Values (blue-shaded values)
~ Construction Worker Receptor ~

Sample ID	Secondary Sample ID	Sample Depth (ft bgs)	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m,p-Xylene	Methylene chloride	Naphthalene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	Tetrachloroethene	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	2-Propanol	Gasoline Range Organics	Σ HQ = HI
8-3-5	5/16/2017	5	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0E+00**
8-3 Dup	5/16/2017	5	*NA*	*ND*	*NA*	*ND*	**4E-05**	*ND*	*ND*	*NA*	**2E-05**	*NA*	**5E-03**	**1E-05**	**4E-03**	**4E-06**	*ND*	*ND*	*NA*	*NA*	**1E-02**

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ATTACHMENT N

Derivation of Air RBCs for Construction Worker Receptor

ATTACHMENT N
Air RBCs for Construction Worker Receptor

The air RBCs for the construction worker receptor are derived using the standard inhalation dose equations for the cancer and noncancer endpoints used by CalEPA, RWQCB, and USEPA to derive their DTSC-SLs, ESLs, and RSLs, respectively, along with exposure parameters for the construction worker receptor set forth in DTSC HERO HHRA Note 1 (CalEPA, 2014).

The air RBCs for the construction worker receptor are calculated as follows:

Eqn. 1:

$$RBC_{sg-c} = \frac{TR \times AT_c}{EF \times ED \times ET} \times \frac{1}{IUR}$$

Eqn. 2:

$$RBC_{sg-nc} = \frac{THQ \times AT_{nc}}{EF \times ED \times ET} \times RfC$$

where:

AT_c	averaging time (cancer endpoint) (70 years = 613,200 hours);
IUR	inhalation unit risk (chemical-specific value in $[\mu g/m^3]^{-1}$) (see **Table N-1**);
THQ	target hazard quotient (HQ) (1.0 [unitless]);
RfC	reference concentration (chemical-specific value in $\mu g/m^3$) (see **Table N-1**);
$RBC_{cw\text{-}sg\text{-}c}$	cancer endpoint air RBC for construction worker exposure scenario (chemical-specific value in $\mu g/m^3$);
TR	target incremental lifetime cancer risk (ILCR) (1E-06 [unitless]);
EF	exposure frequency for construction worker exposure scenario (50 weeks x 5 days/week = 250 days/year);
ED	construction worker exposure duration (1 year);
ET	construction worker exposure time (8 hours/day);
$RBC_{cw\text{-}sg\text{-}nc}$	noncancer endpoint air RBC for construction worker exposure scenario (chemical-specific value in $\mu g/m^3$); and
$AT_{cw\text{-}sg\text{-}nc}$	averaging time (noncancer endpoint) (50 weeks per year x 7 days per week x 1 year = 350 days = 8,400 hours).

The cancer and noncancer air RBCs for the construction worker receptor are presented in **Table N-1**.

TABLE N-1
Risk-Based Air Concentrations
~ Construction Worker Receptor ~

COPC	TR (unitless)	THQ (unitless)	AT_c (hours)	AT_{nc} (hours)	ED (years)	EF (days/year)	ET (hours/day)	IUR $(\mu g/m^3)^{-1}$	RfC $(\mu g/m^3)$	Air RBC $(\mu g/m^3)$	
										Cancer Endpoint	Noncancer Endpoint
TPH-GRO	1.00E-06	1	613200	8400	1	250	8	--	3.00E+01	--	1.26E+02
1,1,1-Trichloroethane	1.00E-06	1	613200	8400	1	250	8	--	1.00E+03	--	4.20E+03
1,1-Dichloroethane	1.00E-06	1	613200	8400	1	250	8	1.60E-06	8.00E+02	1.92E+02	3.36E+03
1,2,4-Trichlorobenzene	1.00E-06	1	613200	8400	1	250	8	7.25E-06	2.00E+00	4.23E+01	8.40E+00
1,2,4-Trimethylbenzene	1.00E-06	1	613200	8400	1	250	8	--	6.00E+01	--	2.52E+02
1,3,5-Trimethylbenzene	1.00E-06	1	613200	8400	1	250	8	--	6.00E+01	--	2.52E+02
1,3-Dichlorobenzene	1.00E-06	1	613200	8400	1	250	8	--	2.00E+02	--	8.40E+02
2,2,4-Trimethylpentane	1.00E-06	1	613200	8400	1	250	8	--	--	--	--
2-Butanone	1.00E-06	1	613200	8400	1	250	8	--	5.00E+03	--	2.10E+04
2-Hexanone	1.00E-06	1	613200	8400	1	250	8	--	3.00E+01	--	1.26E+02
4-Ethyl Toluene	1.00E-06	1	613200	8400	1	250	8	--	1.00E+02	--	4.20E+02
4-Methyl-2-pentanone	1.00E-06	1	613200	8400	1	250	8	--	3.00E+03	--	1.26E+04
Acetone	1.00E-06	1	613200	8400	1	250	8	--	3.10E+04	--	1.30E+05
Acetonitrile	1.00E-06	1	613200	8400	1	250	8	--	6.00E+01	--	2.52E+02
Benzene	1.00E-06	1	613200	8400	1	250	8	2.90E-05	3.00E+00	1.06E+01	1.26E+01
Carbon disulfide	1.00E-06	1	613200	8400	1	250	8	--	7.00E+02	--	2.94E+03
Chlorobenzene	1.00E-06	1	613200	8400	1	250	8	--	5.00E+01	--	2.10E+02
Chloroethane	1.00E-06	1	613200	8400	1	250	8	--	1.00E+04	--	4.20E+04
Chloroform	1.00E-06	1	613200	8400	1	250	8	2.30E-05	9.80E+01	1.33E+01	4.12E+02
Chloromethane	1.00E-06	1	613200	8400	1	250	8	--	9.00E+01	--	3.78E+02
Cyclohexane	1.00E-06	1	613200	8400	1	250	8	--	6.00E+03	--	2.52E+04
Dichlorodifluoromethane	1.00E-06	1	613200	8400	1	250	8	--	1.00E+02	--	4.20E+02
Ethanol	1.00E-06	1	613200	8400	1	250	8	--	--	--	--
Ethylbenzene	1.00E-06	1	613200	8400	1	250	8	2.50E-06	1.00E+03	1.23E+02	4.20E+03
m,p-Xylene	1.00E-06	1	613200	8400	1	250	8	--	1.00E+02	--	4.20E+02
Methylene chloride	1.00E-06	1	613200	8400	1	250	8	1.00E-06	4.00E+02	3.07E+02	1.68E+03
Naphthalene	1.00E-06	1	613200	8400	1	250	8	3.40E-05	3.00E+00	9.02E+00	1.26E+01
n-Propylbenzene	1.00E-06	1	613200	8400	1	250	8	--	1.00E+03	--	4.20E+03
o-Xylene	1.00E-06	1	613200	8400	1	250	8	--	1.00E+02	--	4.20E+02
p-Isopropyltoluene	1.00E-06	1	613200	8400	1	250	8	--	1.00E+03	--	4.20E+03
Tetrachloroethene	1.00E-06	1	613200	8400	1	250	8	6.10E-06	4.00E+01	5.03E+01	1.68E+02
Toluene	1.00E-06	1	613200	8400	1	250	8	--	3.00E+02	--	1.26E+03
Trichloroethene	1.00E-06	1	613200	8400	1	250	8	4.10E-06	2.00E+00	7.48E+01	8.40E+00
Trichlorofluoromethane	1.00E-06	1	613200	8400	1	250	8	--	1.20E+03	--	5.04E+03
Vinyl acetate	1.00E-06	1	613200	8400	1	250	8	--	2.00E+02	--	8.40E+02
Vinyl chloride	1.00E-06	1	613200	8400	1	250	8	7.80E-05	1.00E+02	3.93E+00	4.20E+02
2-Propanol	1.00E-06	1	613200	8400	1	250	8	--	2.00E+02	--	8.40E+02
1,1,2-Trichloroethane	1.00E-06	1	613200	8400	1	250	8	1.60E-05	2.00E-01	1.92E+01	8.40E-01
1,1-Dichloroethene	1.00E-06	1	613200	8400	1	250	8	--	7.00E+01	--	2.94E+02

Green-shaded IUR and RfC values are from DTSC-SL tables. The Air RBCs are also green-shaded to indicate their reliance on CalEPA IUR and RfC values.
Gray-shaded IUR and RfC values are from USEPA RSL tables. The Air RBCs are also gray-shaded to indicate their reliance on USEPA IUR and RfC values.

Surrogates:
1,2-Dichlorobenzene for 1,3-Dichlorobenzene
Xylenes for 4-Ethyl Toluene
n-Propylbenzene for p-Isopropyltoluene

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ATTACHMENT O

ProUCL Output (USEPA, 2015)

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Uncensored Full Data Sets**											
2	**PARC Area 1A**											
3	User Selected Options											
4												
5	From File	WorkSheet_a.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**Barium**											
12												
13	**General Statistics**											
14	Total Number of Observations					29			Number of Distinct Observations			25
15									Number of Missing Observations			10
16	Minimum					35			Mean			110.2
17	Maximum					635			Median			77
18	SD					118.4			Std. Error of Mean			21.99
19	Coefficient of Variation					1.075			Skewness			3.525
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic					0.585			**Shapiro Wilk GOF Test**			
23	5% Shapiro Wilk Critical Value					0.926			Data Not Normal at 5% Significance Level			
24	Lilliefors Test Statistic					0.273			**Lilliefors GOF Test**			
25	5% Lilliefors Critical Value					0.161			Data Not Normal at 5% Significance Level			
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**								**95% UCLs (Adjusted for Skewness)**			
30	95% Student's-t UCL					147.6			95% Adjusted-CLT UCL (Chen-1995)			161.7
31									95% Modified-t UCL (Johnson-1978)			150
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic					1.279			**Anderson-Darling Gamma GOF Test**			
35	5% A-D Critical Value					0.758			Data Not Gamma Distributed at 5% Significance Level			
36	K-S Test Statistic					0.182			**Kolmogorov-Smirnov Gamma GOF Test**			
37	5% K-S Critical Value					0.165			Data Not Gamma Distributed at 5% Significance Level			
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)					1.893			k star (bias corrected MLE)			1.72
42	Theta hat (MLE)					58.19			Theta star (bias corrected MLE)			64.04
43	nu hat (MLE)					109.8			nu star (bias corrected)			99.78
44	MLE Mean (bias corrected)					110.2			MLE Sd (bias corrected)			84
45									Approximate Chi Square Value (0.05)			77.73
46	Adjusted Level of Significance					0.0407			Adjusted Chi Square Value			76.57
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))					141.4			95% Adjusted Gamma UCL (use when n<50)			143.6
50												

51	**Lognormal GOF Test**											
52				Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**						
53				5% Shapiro Wilk Critical Value	0.926	Data Not Lognormal at 5% Significance Level						
54				Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**						
55				5% Lilliefors Critical Value	0.161	Data appear Lognormal at 5% Significance Level						
56	**Data appear Approximate Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59				Minimum of Logged Data	3.555	Mean of logged Data	4.415					
60				Maximum of Logged Data	6.454	SD of logged Data	0.689					
61												
62	**Assuming Lognormal Distribution**											
63				95% H-UCL	138.1	90% Chebyshev (MVUE) UCL	146.8					
64				95% Chebyshev (MVUE) UCL	166.2	97.5% Chebyshev (MVUE) UCL	193.3					
65				99% Chebyshev (MVUE) UCL	246.3							
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71				95% CLT UCL	146.3	95% Jackknife UCL	147.6					
72				95% Standard Bootstrap UCL	146.8	95% Bootstrap-t UCL	196.3					
73				95% Hall's Bootstrap UCL	309.3	95% Percentile Bootstrap UCL	149.7					
74				95% BCA Bootstrap UCL	164.1							
75				90% Chebyshev(Mean, Sd) UCL	176.1	95% Chebyshev(Mean, Sd) UCL	206					
76				97.5% Chebyshev(Mean, Sd) UCL	247.5	99% Chebyshev(Mean, Sd) UCL	328.9					
77												
78	**Suggested UCL to Use**											
79				95% H-UCL	138.1							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
87	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
88	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
89	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
90												
91												

92	**Copper**										
93											
94	**General Statistics**										
95				Total Number of Observations	29			Number of Distinct Observations	24		
96								Number of Missing Observations	10		
97				Minimum	3.6			Mean	36.17		
98				Maximum	243			Median	13		
99				SD	56.35			Std. Error of Mean	10.46		
100				Coefficient of Variation	1.558			Skewness	2.591		
101											
102	**Normal GOF Test**										
103				Shapiro Wilk Test Statistic	0.617			**Shapiro Wilk GOF Test**			
104				5% Shapiro Wilk Critical Value	0.926			Data Not Normal at 5% Significance Level			
105				Lilliefors Test Statistic	0.303			**Lilliefors GOF Test**			
106				5% Lilliefors Critical Value	0.161			Data Not Normal at 5% Significance Level			
107	**Data Not Normal at 5% Significance Level**										
108											
109	**Assuming Normal Distribution**										
110				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
111				95% Student's-t UCL	53.97			95% Adjusted-CLT UCL (Chen-1995)	58.76		
112								95% Modified-t UCL (Johnson-1978)	54.81		
113											
114	**Gamma GOF Test**										
115				A-D Test Statistic	1.624			**Anderson-Darling Gamma GOF Test**			
116				5% A-D Critical Value	0.785			Data Not Gamma Distributed at 5% Significance Level			
117				K-S Test Statistic	0.212			**Kolmogorov-Smirnov Gamma GOF Test**			
118				5% K-S Critical Value	0.169			Data Not Gamma Distributed at 5% Significance Level			
119	**Data Not Gamma Distributed at 5% Significance Level**										
120											
121	**Gamma Statistics**										
122				k hat (MLE)	0.736			k star (bias corrected MLE)	0.683		
123				Theta hat (MLE)	49.11			Theta star (bias corrected MLE)	52.94		
124				nu hat (MLE)	42.72			nu star (bias corrected)	39.63		
125				MLE Mean (bias corrected)	36.17			MLE Sd (bias corrected)	43.76		
126								Approximate Chi Square Value (0.05)	26.21		
127				Adjusted Level of Significance	0.0407			Adjusted Chi Square Value	25.56		
128											
129	**Assuming Gamma Distribution**										
130				95% Approximate Gamma UCL (use when n>=50))	54.7			95% Adjusted Gamma UCL (use when n<50)	56.09		
131											

	A	B	C	D	E	F	G	H	I	J	K	L
132	**Lognormal GOF Test**											
133					Shapiro Wilk Test Statistic	0.914	**Shapiro Wilk Lognormal GOF Test**					
134					5% Shapiro Wilk Critical Value	0.926	Data Not Lognormal at 5% Significance Level					
135					Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**					
136					5% Lilliefors Critical Value	0.161	Data appear Lognormal at 5% Significance Level					
137	**Data appear Approximate Lognormal at 5% Significance Level**											
138												
139	**Lognormal Statistics**											
140					Minimum of Logged Data	1.281			Mean of logged Data	2.773		
141					Maximum of Logged Data	5.493			SD of logged Data	1.23		
142												
143	**Assuming Lognormal Distribution**											
144					95% H-UCL	64.87			90% Chebyshev (MVUE) UCL	59.54		
145					95% Chebyshev (MVUE) UCL	71.71			97.5% Chebyshev (MVUE) UCL	88.59		
146					99% Chebyshev (MVUE) UCL	121.8						
147												
148	**Nonparametric Distribution Free UCL Statistics**											
149	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
150												
151	**Nonparametric Distribution Free UCLs**											
152					95% CLT UCL	53.39			95% Jackknife UCL	53.97		
153					95% Standard Bootstrap UCL	52.49			95% Bootstrap-t UCL	67.51		
154					95% Hall's Bootstrap UCL	70.05			95% Percentile Bootstrap UCL	54.18		
155					95% BCA Bootstrap UCL	60.32						
156					90% Chebyshev(Mean, Sd) UCL	67.57			95% Chebyshev(Mean, Sd) UCL	81.79		
157					97.5% Chebyshev(Mean, Sd) UCL	101.5			99% Chebyshev(Mean, Sd) UCL	140.3		
158												
159	**Suggested UCL to Use**											
160					95% H-UCL	64.87						
161												
162	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
163	Recommendations are based upon data size, data distribution, and skewness.											
164	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
165	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
166												
167	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
168	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
169	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
170	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
171												
172												

173	**Lead**										
174											
175					**General Statistics**						
176				Total Number of Observations	29			Number of Distinct Observations	26		
177								Number of Missing Observations	10		
178				Minimum	1.1			Mean	123.8		
179				Maximum	910			Median	4.4		
180				SD	228.7			Std. Error of Mean	42.47		
181				Coefficient of Variation	1.848			Skewness	2.349		
182											
183					**Normal GOF Test**						
184				Shapiro Wilk Test Statistic	0.615			**Shapiro Wilk GOF Test**			
185				5% Shapiro Wilk Critical Value	0.926			Data Not Normal at 5% Significance Level			
186				Lilliefors Test Statistic	0.308			**Lilliefors GOF Test**			
187				5% Lilliefors Critical Value	0.161			Data Not Normal at 5% Significance Level			
188					**Data Not Normal at 5% Significance Level**						
189											
190					**Assuming Normal Distribution**						
191				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
192				95% Student's-t UCL	196			95% Adjusted-CLT UCL (Chen-1995)	213.4		
193								95% Modified-t UCL (Johnson-1978)	199.1		
194											
195					**Gamma GOF Test**						
196				A-D Test Statistic	2.245			**Anderson-Darling Gamma GOF Test**			
197				5% A-D Critical Value	0.854			Data Not Gamma Distributed at 5% Significance Level			
198				K-S Test Statistic	0.287			**Kolmogorov-Smirnov Gamma GOF Test**			
199				5% K-S Critical Value	0.176			Data Not Gamma Distributed at 5% Significance Level			
200					**Data Not Gamma Distributed at 5% Significance Level**						
201											
202					**Gamma Statistics**						
203				k hat (MLE)	0.308			k star (bias corrected MLE)	0.299		
204				Theta hat (MLE)	401.3			Theta star (bias corrected MLE)	413.3		
205				nu hat (MLE)	17.89			nu star (bias corrected)	17.37		
206				MLE Mean (bias corrected)	123.8			MLE Sd (bias corrected)	226.2		
207								Approximate Chi Square Value (0.05)	8.937		
208				Adjusted Level of Significance	0.0407			Adjusted Chi Square Value	8.576		
209											
210					**Assuming Gamma Distribution**						
211				95% Approximate Gamma UCL (use when n>=50))	240.5			95% Adjusted Gamma UCL (use when n<50)	250.7		
212											

	A	B	C	D	E	F	G	H	I	J	K	L
213	**Lognormal GOF Test**											
214					Shapiro Wilk Test Statistic	0.842	**Shapiro Wilk Lognormal GOF Test**					
215					5% Shapiro Wilk Critical Value	0.926	Data Not Lognormal at 5% Significance Level					
216					Lilliefors Test Statistic	0.226	**Lilliefors Lognormal GOF Test**					
217					5% Lilliefors Critical Value	0.161	Data Not Lognormal at 5% Significance Level					
218	**Data Not Lognormal at 5% Significance Level**											
219												
220	**Lognormal Statistics**											
221					Minimum of Logged Data	0.0953			Mean of logged Data	2.592		
222					Maximum of Logged Data	6.813			SD of logged Data	2.376		
223												
224	**Assuming Lognormal Distribution**											
225					95% H-UCL	1706			90% Chebyshev (MVUE) UCL	466.2		
226					95% Chebyshev (MVUE) UCL	602			97.5% Chebyshev (MVUE) UCL	790.5		
227					99% Chebyshev (MVUE) UCL	1161						
228												
229	**Nonparametric Distribution Free UCL Statistics**											
230	**Data do not follow a Discernible Distribution (0.05)**											
231												
232	**Nonparametric Distribution Free UCLs**											
233					95% CLT UCL	193.6			95% Jackknife UCL	196		
234					95% Standard Bootstrap UCL	193.3			95% Bootstrap-t UCL	221.9		
235					95% Hall's Bootstrap UCL	234			95% Percentile Bootstrap UCL	195.7		
236					95% BCA Bootstrap UCL	219.7						
237					90% Chebyshev(Mean, Sd) UCL	251.2			95% Chebyshev(Mean, Sd) UCL	308.9		
238					97.5% Chebyshev(Mean, Sd) UCL	389			99% Chebyshev(Mean, Sd) UCL	546.3		
239												
240	**Suggested UCL to Use**											
241					97.5% Chebyshev (Mean, Sd) UCL	389						
242												
243	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
244	Recommendations are based upon data size, data distribution, and skewness.											
245	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
246	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
247												
248												

	A	B	C	D	E	F	G	H	I	J	K	L
249	**Mercury**											
250												
251	**General Statistics**											
252					Total Number of Observations	29				Number of Distinct Observations		11
253										Number of Missing Observations		10
254					Minimum	0.11				Mean		0.293
255					Maximum	3.5				Median		0.11
256					SD	0.639				Std. Error of Mean		0.119
257					Coefficient of Variation	2.178				Skewness		4.869
258												
259	**Normal GOF Test**											
260					Shapiro Wilk Test Statistic	0.316				**Shapiro Wilk GOF Test**		
261					5% Shapiro Wilk Critical Value	0.926				Data Not Normal at 5% Significance Level		
262					Lilliefors Test Statistic	0.436				**Lilliefors GOF Test**		
263					5% Lilliefors Critical Value	0.161				Data Not Normal at 5% Significance Level		
264	**Data Not Normal at 5% Significance Level**											
265												
266	**Assuming Normal Distribution**											
267				**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**		
268					95% Student's-t UCL	0.495				95% Adjusted-CLT UCL (Chen-1995)		0.603
269										95% Modified-t UCL (Johnson-1978)		0.513
270												
271	**Gamma GOF Test**											
272					A-D Test Statistic	5.902				**Anderson-Darling Gamma GOF Test**		
273					5% A-D Critical Value	0.774				Data Not Gamma Distributed at 5% Significance Level		
274					K-S Test Statistic	0.354				**Kolmogorov-Smirnov Gamma GOF Test**		
275					5% K-S Critical Value	0.167				Data Not Gamma Distributed at 5% Significance Level		
276	**Data Not Gamma Distributed at 5% Significance Level**											
277												
278	**Gamma Statistics**											
279					k hat (MLE)	1.006				k star (bias corrected MLE)		0.925
280					Theta hat (MLE)	0.292				Theta star (bias corrected MLE)		0.317
281					nu hat (MLE)	58.33				nu star (bias corrected)		53.63
282					MLE Mean (bias corrected)	0.293				MLE Sd (bias corrected)		0.305
283										Approximate Chi Square Value (0.05)		37.81
284					Adjusted Level of Significance	0.0407				Adjusted Chi Square Value		37.01
285												
286	**Assuming Gamma Distribution**											
287					95% Approximate Gamma UCL (use when n>=50))	0.416				95% Adjusted Gamma UCL (use when n<50)		0.425
288												

289	**Lognormal GOF Test**											
290				Shapiro Wilk Test Statistic	0.594	**Shapiro Wilk Lognormal GOF Test**						
291				5% Shapiro Wilk Critical Value	0.926	Data Not Lognormal at 5% Significance Level						
292				Lilliefors Test Statistic	0.299	**Lilliefors Lognormal GOF Test**						
293				5% Lilliefors Critical Value	0.161	Data Not Lognormal at 5% Significance Level						
294	**Data Not Lognormal at 5% Significance Level**											
295												
296	**Lognormal Statistics**											
297				Minimum of Logged Data	-2.207			Mean of logged Data	-1.8			
298				Maximum of Logged Data	1.253			SD of logged Data	0.775			
299												
300	**Assuming Lognormal Distribution**											
301				95% H-UCL	0.308			90% Chebyshev (MVUE) UCL	0.325			
302				95% Chebyshev (MVUE) UCL	0.372			97.5% Chebyshev (MVUE) UCL	0.437			
303				99% Chebyshev (MVUE) UCL	0.566							
304												
305	**Nonparametric Distribution Free UCL Statistics**											
306	**Data do not follow a Discernible Distribution (0.05)**											
307												
308	**Nonparametric Distribution Free UCLs**											
309				95% CLT UCL	0.489			95% Jackknife UCL	0.495			
310				95% Standard Bootstrap UCL	0.486			95% Bootstrap-t UCL	1.59			
311				95% Hall's Bootstrap UCL	1.286			95% Percentile Bootstrap UCL	0.516			
312				95% BCA Bootstrap UCL	0.668							
313				90% Chebyshev(Mean, Sd) UCL	0.65			95% Chebyshev(Mean, Sd) UCL	0.811			
314				97.5% Chebyshev(Mean, Sd) UCL	1.035			99% Chebyshev(Mean, Sd) UCL	1.474			
315												
316	**Suggested UCL to Use**											
317				95% Chebyshev (Mean, Sd) UCL	0.811							
318												
319	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
320	Recommendations are based upon data size, data distribution, and skewness.											
321	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
322	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
323												
324												

Zinc

General Statistics

Total Number of Observations	29	Number of Distinct Observations	24
		Number of Missing Observations	10
Minimum	14	Mean	138.7
Maximum	1586	Median	41
SD	298.5	Std. Error of Mean	55.43
Coefficient of Variation	2.152	Skewness	4.41

Normal GOF Test

Shapiro Wilk Test Statistic	0.434	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.338	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	233	95% Adjusted-CLT UCL (Chen-1995)	278.4
		95% Modified-t UCL (Johnson-1978)	240.6

Gamma GOF Test

A-D Test Statistic	2.141	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.794	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.238	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.17	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.661	k star (bias corrected MLE)	0.615
Theta hat (MLE)	209.9	Theta star (bias corrected MLE)	225.4
nu hat (MLE)	38.31	nu star (bias corrected)	35.68
MLE Mean (bias corrected)	138.7	MLE Sd (bias corrected)	176.8
		Approximate Chi Square Value (0.05)	23.01
Adjusted Level of Significance	0.0407	Adjusted Chi Square Value	22.41

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	215	95% Adjusted Gamma UCL (use when n<50)	220.9

	A	B	C	D	E	F	G	H	I	J	K	L
365	**Lognormal GOF Test**											
366					Shapiro Wilk Test Statistic	0.895	**Shapiro Wilk Lognormal GOF Test**					
367					5% Shapiro Wilk Critical Value	0.926	Data Not Lognormal at 5% Significance Level					
368					Lilliefors Test Statistic	0.166	**Lilliefors Lognormal GOF Test**					
369					5% Lilliefors Critical Value	0.161	Data Not Lognormal at 5% Significance Level					
370	**Data Not Lognormal at 5% Significance Level**											
371												
372	**Lognormal Statistics**											
373					Minimum of Logged Data	2.639			Mean of logged Data	4.01		
374					Maximum of Logged Data	7.369			SD of logged Data	1.212		
375												
376	**Assuming Lognormal Distribution**											
377					95% H-UCL	215.2			90% Chebyshev (MVUE) UCL	199.2		
378					95% Chebyshev (MVUE) UCL	239.5			97.5% Chebyshev (MVUE) UCL	295.4		
379					99% Chebyshev (MVUE) UCL	405.3						
380												
381	**Nonparametric Distribution Free UCL Statistics**											
382	**Data do not follow a Discernible Distribution (0.05)**											
383												
384	**Nonparametric Distribution Free UCLs**											
385					95% CLT UCL	229.9			95% Jackknife UCL	233		
386					95% Standard Bootstrap UCL	233.2			95% Bootstrap-t UCL	448.9		
387					95% Hall's Bootstrap UCL	580.3			95% Percentile Bootstrap UCL	245		
388					95% BCA Bootstrap UCL	295.2						
389					90% Chebyshev(Mean, Sd) UCL	305			95% Chebyshev(Mean, Sd) UCL	380.3		
390					97.5% Chebyshev(Mean, Sd) UCL	484.9			99% Chebyshev(Mean, Sd) UCL	690.3		
391												
392	**Suggested UCL to Use**											
393					95% Chebyshev (Mean, Sd) UCL	380.3						
394												
395	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
396	Recommendations are based upon data size, data distribution, and skewness.											
397	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
398	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Uncensored Full Data Sets**											
2	**PARC Area 2A, 2B, 2C**											
3	User Selected Options											
4												
5	From File	WorkSheet.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**Barium**											
12												
13	**General Statistics**											
14	Total Number of Observations					47	Number of Distinct Observations					38
15							Number of Missing Observations					0
16	Minimum					15	Mean					69.38
17	Maximum					169	Median					58
18	SD					41.2	Std. Error of Mean					6.009
19	Coefficient of Variation					0.594	Skewness					0.949
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic					0.885	**Shapiro Wilk GOF Test**					
23	5% Shapiro Wilk Critical Value					0.946	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.188	**Lilliefors GOF Test**					
25	5% Lilliefors Critical Value					0.128	Data Not Normal at 5% Significance Level					
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL					79.47	95% Adjusted-CLT UCL (Chen-1995)					80.16
31							95% Modified-t UCL (Johnson-1978)					79.61
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic					0.515	**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value					0.756	Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.117	**Kolmogorov-Smirnov Gamma GOF Test**					
37	5% K-S Critical Value					0.13	Detected data appear Gamma Distributed at 5% Significance Level					
38	**Detected data appear Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)					3.059	k star (bias corrected MLE)					2.878
42	Theta hat (MLE)					22.68	Theta star (bias corrected MLE)					24.11
43	nu hat (MLE)					287.5	nu star (bias corrected)					270.5
44	MLE Mean (bias corrected)					69.38	MLE Sd (bias corrected)					40.9
45							Approximate Chi Square Value (0.05)					233.4
46	Adjusted Level of Significance					0.0449	Adjusted Chi Square Value					232.3
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50)					80.41	95% Adjusted Gamma UCL (use when n<50)					80.78
50												

51	**Lognormal GOF Test**											
52				Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk Lognormal GOF Test**						
53				5% Shapiro Wilk Critical Value	0.946	Data appear Lognormal at 5% Significance Level						
54				Lilliefors Test Statistic	0.0777	**Lilliefors Lognormal GOF Test**						
55				5% Lilliefors Critical Value	0.128	Data appear Lognormal at 5% Significance Level						
56	**Data appear Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59				Minimum of Logged Data	2.708			Mean of logged Data	4.067			
60				Maximum of Logged Data	5.13			SD of logged Data	0.606			
61												
62	**Assuming Lognormal Distribution**											
63				95% H-UCL	83.6			90% Chebyshev (MVUE) UCL	89.67			
64				95% Chebyshev (MVUE) UCL	98.65			97.5% Chebyshev (MVUE) UCL	111.1			
65				99% Chebyshev (MVUE) UCL	135.6							
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71				95% CLT UCL	79.27			95% Jackknife UCL	79.47			
72				95% Standard Bootstrap UCL	79.1			95% Bootstrap-t UCL	80.99			
73				95% Hall's Bootstrap UCL	80.2			95% Percentile Bootstrap UCL	80.15			
74				95% BCA Bootstrap UCL	79.85							
75				90% Chebyshev(Mean, Sd) UCL	87.41			95% Chebyshev(Mean, Sd) UCL	95.58			
76				97.5% Chebyshev(Mean, Sd) UCL	106.9			99% Chebyshev(Mean, Sd) UCL	129.2			
77												
78	**Suggested UCL to Use**											
79				95% Adjusted Gamma UCL	80.78							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86												

87	**Copper**											
88												
89						**General Statistics**						
90					Total Number of Observations	47			Number of Distinct Observations		36	
91									Number of Missing Observations		0	
92					Minimum	2.5			Mean		16.47	
93					Maximum	264			Median		8.7	
94					SD	37.93			Std. Error of Mean		5.533	
95					Coefficient of Variation	2.303			Skewness		6.318	
96												
97						**Normal GOF Test**						
98					Shapiro Wilk Test Statistic	0.302			**Shapiro Wilk GOF Test**			
99					5% Shapiro Wilk Critical Value	0.946			Data Not Normal at 5% Significance Level			
100					Lilliefors Test Statistic	0.369			**Lilliefors GOF Test**			
101					5% Lilliefors Critical Value	0.128			Data Not Normal at 5% Significance Level			
102						**Data Not Normal at 5% Significance Level**						
103												
104						**Assuming Normal Distribution**						
105					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
106					95% Student's-t UCL	25.76			95% Adjusted-CLT UCL (Chen-1995)		31.02	
107									95% Modified-t UCL (Johnson-1978)		26.61	
108												
109						**Gamma GOF Test**						
110					A-D Test Statistic	3.706			**Anderson-Darling Gamma GOF Test**			
111					5% A-D Critical Value	0.777			Data Not Gamma Distributed at 5% Significance Level			
112					K-S Test Statistic	0.219			**Kolmogorov-Smirnov Gamma GOF Test**			
113					5% K-S Critical Value	0.133			Data Not Gamma Distributed at 5% Significance Level			
114						**Data Not Gamma Distributed at 5% Significance Level**						
115												
116						**Gamma Statistics**						
117					k hat (MLE)	1.043			k star (bias corrected MLE)		0.99	
118					Theta hat (MLE)	15.8			Theta star (bias corrected MLE)		16.63	
119					nu hat (MLE)	98.02			nu star (bias corrected)		93.1	
120					MLE Mean (bias corrected)	16.47			MLE Sd (bias corrected)		16.55	
121									Approximate Chi Square Value (0.05)		71.84	
122					Adjusted Level of Significance	0.0449			Adjusted Chi Square Value		71.25	
123												
124						**Assuming Gamma Distribution**						
125					95% Approximate Gamma UCL (use when n>=50))	21.34			95% Adjusted Gamma UCL (use when n<50)		21.52	
126												

127	**Lognormal GOF Test**											
128				Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk Lognormal GOF Test**						
129				5% Shapiro Wilk Critical Value	0.946	Data Not Lognormal at 5% Significance Level						
130				Lilliefors Test Statistic	0.105	**Lilliefors Lognormal GOF Test**						
131				5% Lilliefors Critical Value	0.128	Data appear Lognormal at 5% Significance Level						
132	**Data appear Approximate Lognormal at 5% Significance Level**											
133												
134	**Lognormal Statistics**											
135				Minimum of Logged Data	0.916	Mean of logged Data	2.251					
136				Maximum of Logged Data	5.576	SD of logged Data	0.821					
137												
138	**Assuming Lognormal Distribution**											
139				95% H-UCL	17.26	90% Chebyshev (MVUE) UCL	18.5					
140				95% Chebyshev (MVUE) UCL	20.92	97.5% Chebyshev (MVUE) UCL	24.26					
141				99% Chebyshev (MVUE) UCL	30.84							
142												
143	**Nonparametric Distribution Free UCL Statistics**											
144	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
145												
146	**Nonparametric Distribution Free UCLs**											
147				95% CLT UCL	25.57	95% Jackknife UCL	25.76					
148				95% Standard Bootstrap UCL	25.24	95% Bootstrap-t UCL	58.5					
149				95% Hall's Bootstrap UCL	62.09	95% Percentile Bootstrap UCL	26.76					
150				95% BCA Bootstrap UCL	36.13							
151				90% Chebyshev(Mean, Sd) UCL	33.07	95% Chebyshev(Mean, Sd) UCL	40.59					
152				97.5% Chebyshev(Mean, Sd) UCL	51.02	99% Chebyshev(Mean, Sd) UCL	71.52					
153												
154	**Suggested UCL to Use**											
155				95% H-UCL	17.26							
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												
162	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
163	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
164	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
165	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
166												
167												

	A	B	C	D	E	F	G	H	I	J	K	L
168	**Lead**											
169												
170	**General Statistics**											
171					Total Number of Observations	47			Number of Distinct Observations	32		
172									Number of Missing Observations	0		
173					Minimum	1			Mean	10.3		
174					Maximum	180			Median	2.5		
175					SD	27.57			Std. Error of Mean	4.022		
176					Coefficient of Variation	2.677			Skewness	5.393		
177												
178	**Normal GOF Test**											
179					Shapiro Wilk Test Statistic	0.368			**Shapiro Wilk GOF Test**			
180					5% Shapiro Wilk Critical Value	0.946			Data Not Normal at 5% Significance Level			
181					Lilliefors Test Statistic	0.384			**Lilliefors GOF Test**			
182					5% Lilliefors Critical Value	0.128			Data Not Normal at 5% Significance Level			
183	**Data Not Normal at 5% Significance Level**											
184												
185	**Assuming Normal Distribution**											
186					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
187					95% Student's-t UCL	17.05			95% Adjusted-CLT UCL (Chen-1995)	20.3		
188									95% Modified-t UCL (Johnson-1978)	17.58		
189												
190	**Gamma GOF Test**											
191					A-D Test Statistic	5.151			**Anderson-Darling Gamma GOF Test**			
192					5% A-D Critical Value	0.809			Data Not Gamma Distributed at 5% Significance Level			
193					K-S Test Statistic	0.241			**Kolmogorov-Smirnov Gamma GOF Test**			
194					5% K-S Critical Value	0.136			Data Not Gamma Distributed at 5% Significance Level			
195	**Data Not Gamma Distributed at 5% Significance Level**											
196												
197	**Gamma Statistics**											
198					k hat (MLE)	0.55			k star (bias corrected MLE)	0.529		
199					Theta hat (MLE)	18.74			Theta star (bias corrected MLE)	19.48		
200					nu hat (MLE)	51.67			nu star (bias corrected)	49.71		
201					MLE Mean (bias corrected)	10.3			MLE Sd (bias corrected)	14.16		
202									Approximate Chi Square Value (0.05)	34.52		
203					Adjusted Level of Significance	0.0449			Adjusted Chi Square Value	34.12		
204												
205	**Assuming Gamma Distribution**											
206					95% Approximate Gamma UCL (use when n>=50))	14.83			95% Adjusted Gamma UCL (use when n<50)	15.01		
207												

208	**Lognormal GOF Test**											
209					Shapiro Wilk Test Statistic	0.839	**Shapiro Wilk Lognormal GOF Test**					
210					5% Shapiro Wilk Critical Value	0.946	Data Not Lognormal at 5% Significance Level					
211					Lilliefors Test Statistic	0.17	**Lilliefors Lognormal GOF Test**					
212					5% Lilliefors Critical Value	0.128	Data Not Lognormal at 5% Significance Level					
213	**Data Not Lognormal at 5% Significance Level**											
214												
215	**Lognormal Statistics**											
216					Minimum of Logged Data	0	Mean of logged Data	1.193				
217					Maximum of Logged Data	5.193	SD of logged Data	1.253				
218												
219	**Assuming Lognormal Distribution**											
220					95% H-UCL	11.72	90% Chebyshev (MVUE) UCL	11.83				
221					95% Chebyshev (MVUE) UCL	14.01	97.5% Chebyshev (MVUE) UCL	17.03				
222					99% Chebyshev (MVUE) UCL	22.97						
223												
224	**Nonparametric Distribution Free UCL Statistics**											
225	**Data do not follow a Discernible Distribution (0.05)**											
226												
227	**Nonparametric Distribution Free UCLs**											
228					95% CLT UCL	16.92	95% Jackknife UCL	17.05				
229					95% Standard Bootstrap UCL	16.77	95% Bootstrap-t UCL	28.21				
230					95% Hall's Bootstrap UCL	38.5	95% Percentile Bootstrap UCL	17.59				
231					95% BCA Bootstrap UCL	21.71						
232					90% Chebyshev(Mean, Sd) UCL	22.37	95% Chebyshev(Mean, Sd) UCL	27.83				
233					97.5% Chebyshev(Mean, Sd) UCL	35.42	99% Chebyshev(Mean, Sd) UCL	50.32				
234												
235	**Suggested UCL to Use**											
236					95% Chebyshev (Mean, Sd) UCL	27.83						
237												
238	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
239	Recommendations are based upon data size, data distribution, and skewness.											
240	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
241	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
242												
243												

244	**Mercury**											
245												
246	**General Statistics**											
247				Total Number of Observations		47			Number of Distinct Observations		10	
248									Number of Missing Observations		0	
249				Minimum		0.061			Mean		0.209	
250				Maximum		3.6			Median		0.11	
251				SD		0.522			Std. Error of Mean		0.0762	
252				Coefficient of Variation		2.493			Skewness		6.288	
253												
254	**Normal GOF Test**											
255				Shapiro Wilk Test Statistic		0.221			**Shapiro Wilk GOF Test**			
256				5% Shapiro Wilk Critical Value		0.946			Data Not Normal at 5% Significance Level			
257				Lilliefors Test Statistic		0.454			**Lilliefors GOF Test**			
258				5% Lilliefors Critical Value		0.128			Data Not Normal at 5% Significance Level			
259	**Data Not Normal at 5% Significance Level**											
260												
261	**Assuming Normal Distribution**											
262				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
263				95% Student's-t UCL		0.337			95% Adjusted-CLT UCL (Chen-1995)		0.409	
264									95% Modified-t UCL (Johnson-1978)		0.349	
265												
266	**Gamma GOF Test**											
267				A-D Test Statistic		13.7			**Anderson-Darling Gamma GOF Test**			
268				5% A-D Critical Value		0.775			Data Not Gamma Distributed at 5% Significance Level			
269				K-S Test Statistic		0.455			**Kolmogorov-Smirnov Gamma GOF Test**			
270				5% K-S Critical Value		0.132			Data Not Gamma Distributed at 5% Significance Level			
271	**Data Not Gamma Distributed at 5% Significance Level**											
272												
273	**Gamma Statistics**											
274				k hat (MLE)		1.164			k star (bias corrected MLE)		1.104	
275				Theta hat (MLE)		0.18			Theta star (bias corrected MLE)		0.19	
276				nu hat (MLE)		109.5			nu star (bias corrected)		103.8	
277				MLE Mean (bias corrected)		0.209			MLE Sd (bias corrected)		0.199	
278									Approximate Chi Square Value (0.05)		81.3	
279				Adjusted Level of Significance		0.0449			Adjusted Chi Square Value		80.67	
280												
281	**Assuming Gamma Distribution**											
282				95% Approximate Gamma UCL (use when n>=50))		0.267			95% Adjusted Gamma UCL (use when n<50)		0.27	
283												

	A	B	C	D	E	F	G	H	I	J	K	L
284	**Lognormal GOF Test**											
285					Shapiro Wilk Test Statistic	0.421	**Shapiro Wilk Lognormal GOF Test**					
286					5% Shapiro Wilk Critical Value	0.946	Data Not Lognormal at 5% Significance Level					
287					Lilliefors Test Statistic	0.387	**Lilliefors Lognormal GOF Test**					
288					5% Lilliefors Critical Value	0.128	Data Not Lognormal at 5% Significance Level					
289	**Data Not Lognormal at 5% Significance Level**											
290												
291	**Lognormal Statistics**											
292					Minimum of Logged Data	-2.797			Mean of logged Data	-2.05		
293					Maximum of Logged Data	1.281			SD of logged Data	0.619		
294												
295	**Assuming Lognormal Distribution**											
296					95% H-UCL	0.187			90% Chebyshev (MVUE) UCL	0.2		
297					95% Chebyshev (MVUE) UCL	0.221			97.5% Chebyshev (MVUE) UCL	0.249		
298					99% Chebyshev (MVUE) UCL	0.305						
299												
300	**Nonparametric Distribution Free UCL Statistics**											
301	**Data do not follow a Discernible Distribution (0.05)**											
302												
303	**Nonparametric Distribution Free UCLs**											
304					95% CLT UCL	0.335			95% Jackknife UCL	0.337		
305					95% Standard Bootstrap UCL	0.336			95% Bootstrap-t UCL	2.282		
306					95% Hall's Bootstrap UCL	1.296			95% Percentile Bootstrap UCL	0.356		
307					95% BCA Bootstrap UCL	0.471						
308					90% Chebyshev(Mean, Sd) UCL	0.438			95% Chebyshev(Mean, Sd) UCL	0.541		
309					97.5% Chebyshev(Mean, Sd) UCL	0.685			99% Chebyshev(Mean, Sd) UCL	0.967		
310												
311	**Suggested UCL to Use**											
312					95% Chebyshev (Mean, Sd) UCL	0.541						
313												
314	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
315	Recommendations are based upon data size, data distribution, and skewness.											
316	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
317	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
318												
319												

	A	B	C	D	E	F	G	H	I	J	K	L
320	**TPH-GRO**											
321												
322						**General Statistics**						
323					Total Number of Observations	43			Number of Distinct Observations		3	
324									Number of Missing Observations		4	
325					Minimum	1.1			Mean		10.49	
326					Maximum	391			Median		1.1	
327					SD	59.45			Std. Error of Mean		9.066	
328					Coefficient of Variation	5.667			Skewness		6.545	
329												
330						**Normal GOF Test**						
331					Shapiro Wilk Test Statistic	0.163			**Shapiro Wilk GOF Test**			
332					5% Shapiro Wilk Critical Value	0.943			Data Not Normal at 5% Significance Level			
333					Lilliefors Test Statistic	0.516			**Lilliefors GOF Test**			
334					5% Lilliefors Critical Value	0.134			Data Not Normal at 5% Significance Level			
335						**Data Not Normal at 5% Significance Level**						
336												
337						**Assuming Normal Distribution**						
338					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
339					95% Student's-t UCL	25.74			95% Adjusted-CLT UCL (Chen-1995)		35.07	
340									95% Modified-t UCL (Johnson-1978)		27.25	
341												
342						**Gamma GOF Test**						
343					A-D Test Statistic	16.78			**Anderson-Darling Gamma GOF Test**			
344					5% A-D Critical Value	0.853			Data Not Gamma Distributed at 5% Significance Level			
345					K-S Test Statistic	0.588			**Kolmogorov-Smirnov Gamma GOF Test**			
346					5% K-S Critical Value	0.146			Data Not Gamma Distributed at 5% Significance Level			
347						**Data Not Gamma Distributed at 5% Significance Level**						
348												
349						**Gamma Statistics**						
350					k hat (MLE)	0.33			k star (bias corrected MLE)		0.322	
351					Theta hat (MLE)	31.8			Theta star (bias corrected MLE)		32.54	
352					nu hat (MLE)	28.37			nu star (bias corrected)		27.73	
353					MLE Mean (bias corrected)	10.49			MLE Sd (bias corrected)		18.48	
354									Approximate Chi Square Value (0.05)		16.72	
355					Adjusted Level of Significance	0.0444			Adjusted Chi Square Value		16.42	
356												
357						**Assuming Gamma Distribution**						
358					95% Approximate Gamma UCL (use when n>=50))	17.4			95% Adjusted Gamma UCL (use when n<50)		17.72	
359												

360	**Lognormal GOF Test**											
361					Shapiro Wilk Test Statistic	0.225	**Shapiro Wilk Lognormal GOF Test**					
362					5% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 5% Significance Level					
363					Lilliefors Test Statistic	0.534	**Lilliefors Lognormal GOF Test**					
364					5% Lilliefors Critical Value	0.134	Data Not Lognormal at 5% Significance Level					
365	**Data Not Lognormal at 5% Significance Level**											
366												
367	**Lognormal Statistics**											
368					Minimum of Logged Data	0.0953	Mean of logged Data	0.293				
369					Maximum of Logged Data	5.969	SD of logged Data	0.972				
370												
371	**Assuming Lognormal Distribution**											
372					95% H-UCL	3.047	90% Chebyshev (MVUE) UCL	3.207				
373					95% Chebyshev (MVUE) UCL	3.701	97.5% Chebyshev (MVUE) UCL	4.387				
374					99% Chebyshev (MVUE) UCL	5.736						
375												
376	**Nonparametric Distribution Free UCL Statistics**											
377	**Data do not follow a Discernible Distribution (0.05)**											
378												
379	**Nonparametric Distribution Free UCLs**											
380					95% CLT UCL	25.4	95% Jackknife UCL	25.74				
381					95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A				
382					95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A				
383					95% BCA Bootstrap UCL	N/A						
384					90% Chebyshev(Mean, Sd) UCL	37.69	95% Chebyshev(Mean, Sd) UCL	50.01				
385					97.5% Chebyshev(Mean, Sd) UCL	67.1	99% Chebyshev(Mean, Sd) UCL	100.7				
386												
387	**Suggested UCL to Use**											
388					95% Chebyshev (Mean, Sd) UCL	50.01						
389												
390	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
391	Recommendations are based upon data size, data distribution, and skewness.											
392	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
393	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
394												
395												

	A	B	C	D	E	F	G	H	I	J	K	L
396	**TPH-DRO**											
397												
398						**General Statistics**						
399					Total Number of Observations	43			Number of Distinct Observations	7		
400									Number of Missing Observations	4		
401					Minimum	3			Mean	11.97		
402					Maximum	53			Median	10.6		
403					SD	6.767			Std. Error of Mean	1.032		
404					Coefficient of Variation	0.565			Skewness	5.547		
405												
406						**Normal GOF Test**						
407					Shapiro Wilk Test Statistic	0.325			**Shapiro Wilk GOF Test**			
408					5% Shapiro Wilk Critical Value	0.943			Data Not Normal at 5% Significance Level			
409					Lilliefors Test Statistic	0.441			**Lilliefors GOF Test**			
410					5% Lilliefors Critical Value	0.134			Data Not Normal at 5% Significance Level			
411						**Data Not Normal at 5% Significance Level**						
412												
413						**Assuming Normal Distribution**						
414					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
415					95% Student's-t UCL	13.7			95% Adjusted-CLT UCL (Chen-1995)	14.6		
416									95% Modified-t UCL (Johnson-1978)	13.85		
417												
418						**Gamma GOF Test**						
419					A-D Test Statistic	10.7			**Anderson-Darling Gamma GOF Test**			
420					5% A-D Critical Value	0.751			Data Not Gamma Distributed at 5% Significance Level			
421					K-S Test Statistic	0.437			**Kolmogorov-Smirnov Gamma GOF Test**			
422					5% K-S Critical Value	0.135			Data Not Gamma Distributed at 5% Significance Level			
423						**Data Not Gamma Distributed at 5% Significance Level**						
424												
425						**Gamma Statistics**						
426					k hat (MLE)	7.164			k star (bias corrected MLE)	6.68		
427					Theta hat (MLE)	1.67			Theta star (bias corrected MLE)	1.792		
428					nu hat (MLE)	616.1			nu star (bias corrected)	574.5		
429					MLE Mean (bias corrected)	11.97			MLE Sd (bias corrected)	4.63		
430									Approximate Chi Square Value (0.05)	519.9		
431					Adjusted Level of Significance	0.0444			Adjusted Chi Square Value	518.1		
432												
433						**Assuming Gamma Distribution**						
434					95% Approximate Gamma UCL (use when n>=50))	13.22			95% Adjusted Gamma UCL (use when n<50)	13.27		
435												

436	**Lognormal GOF Test**											
437					Shapiro Wilk Test Statistic	0.481	**Shapiro Wilk Lognormal GOF Test**					
438					5% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 5% Significance Level					
439					Lilliefors Test Statistic	0.419	**Lilliefors Lognormal GOF Test**					
440					5% Lilliefors Critical Value	0.134	Data Not Lognormal at 5% Significance Level					
441	**Data Not Lognormal at 5% Significance Level**											
442												
443	**Lognormal Statistics**											
444					Minimum of Logged Data	1.099	Mean of logged Data	2.411				
445					Maximum of Logged Data	3.97	SD of logged Data	0.34				
446												
447	**Assuming Lognormal Distribution**											
448					95% H-UCL	12.98	90% Chebyshev (MVUE) UCL	13.67				
449					95% Chebyshev (MVUE) UCL	14.52	97.5% Chebyshev (MVUE) UCL	15.7				
450					99% Chebyshev (MVUE) UCL	18.01						
451												
452	**Nonparametric Distribution Free UCL Statistics**											
453	**Data do not follow a Discernible Distribution (0.05)**											
454												
455	**Nonparametric Distribution Free UCLs**											
456					95% CLT UCL	13.66	95% Jackknife UCL	13.7				
457					95% Standard Bootstrap UCL	13.65	95% Bootstrap-t UCL	17.36				
458					95% Hall's Bootstrap UCL	21.15	95% Percentile Bootstrap UCL	13.91				
459					95% BCA Bootstrap UCL	15.24						
460					90% Chebyshev(Mean, Sd) UCL	15.06	95% Chebyshev(Mean, Sd) UCL	16.47				
461					97.5% Chebyshev(Mean, Sd) UCL	18.41	99% Chebyshev(Mean, Sd) UCL	22.24				
462												
463	**Suggested UCL to Use**											
464					95% Student's-t UCL	13.7	or 95% Modified-t UCL	13.85				
465												
466	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
467	Recommendations are based upon data size, data distribution, and skewness.											
468	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
469	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
470												
471												

	A	B	C	D	E	F	G	H	I	J	K	L
472	**TPH-ORO**											
473												
474						**General Statistics**						
475					Total Number of Observations	39			Number of Distinct Observations		6	
476									Number of Missing Observations		8	
477					Minimum	10.6			Mean		12.57	
478					Maximum	45			Median		10.6	
479					SD	6.774			Std. Error of Mean		1.085	
480					Coefficient of Variation	0.539			Skewness		3.916	
481												
482						**Normal GOF Test**						
483					Shapiro Wilk Test Statistic	0.344			**Shapiro Wilk GOF Test**			
484					5% Shapiro Wilk Critical Value	0.939			Data Not Normal at 5% Significance Level			
485					Lilliefors Test Statistic	0.486			**Lilliefors GOF Test**			
486					5% Lilliefors Critical Value	0.14			Data Not Normal at 5% Significance Level			
487						**Data Not Normal at 5% Significance Level**						
488												
489						**Assuming Normal Distribution**						
490					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
491					95% Student's-t UCL	14.4			95% Adjusted-CLT UCL (Chen-1995)		15.09	
492									95% Modified-t UCL (Johnson-1978)		14.52	
493												
494						**Gamma GOF Test**						
495					A-D Test Statistic	11.67			**Anderson-Darling Gamma GOF Test**			
496					5% A-D Critical Value	0.75			Data Not Gamma Distributed at 5% Significance Level			
497					K-S Test Statistic	0.499			**Kolmogorov-Smirnov Gamma GOF Test**			
498					5% K-S Critical Value	0.141			Data Not Gamma Distributed at 5% Significance Level			
499						**Data Not Gamma Distributed at 5% Significance Level**						
500												
501						**Gamma Statistics**						
502					k hat (MLE)	7.313			k star (bias corrected MLE)		6.768	
503					Theta hat (MLE)	1.719			Theta star (bias corrected MLE)		1.858	
504					nu hat (MLE)	570.4			nu star (bias corrected)		527.9	
505					MLE Mean (bias corrected)	12.57			MLE Sd (bias corrected)		4.833	
506									Approximate Chi Square Value (0.05)		475.6	
507					Adjusted Level of Significance	0.0437			Adjusted Chi Square Value		473.7	
508												
509						**Assuming Gamma Distribution**						
510					95% Approximate Gamma UCL (use when n>=50))	13.96			95% Adjusted Gamma UCL (use when n<50)		14.01	
511												

	A	B	C	D	E	F	G	H	I	J	K	L
512	**Lognormal GOF Test**											
513					Shapiro Wilk Test Statistic	0.372	**Shapiro Wilk Lognormal GOF Test**					
514					5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level					
515					Lilliefors Test Statistic	0.496	**Lilliefors Lognormal GOF Test**					
516					5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level					
517	**Data Not Lognormal at 5% Significance Level**											
518												
519	**Lognormal Statistics**											
520					Minimum of Logged Data	2.361			Mean of logged Data	2.462		
521					Maximum of Logged Data	3.807			SD of logged Data	0.318		
522												
523	**Assuming Lognormal Distribution**											
524					95% H-UCL	13.53			90% Chebyshev (MVUE) UCL	14.23		
525					95% Chebyshev (MVUE) UCL	15.1			97.5% Chebyshev (MVUE) UCL	16.31		
526					99% Chebyshev (MVUE) UCL	18.67						
527												
528	**Nonparametric Distribution Free UCL Statistics**											
529	**Data do not follow a Discernible Distribution (0.05)**											
530												
531	**Nonparametric Distribution Free UCLs**											
532					95% CLT UCL	14.36			95% Jackknife UCL	14.4		
533					95% Standard Bootstrap UCL	14.35			95% Bootstrap-t UCL	17.47		
534					95% Hall's Bootstrap UCL	15.12			95% Percentile Bootstrap UCL	14.53		
535					95% BCA Bootstrap UCL	15.1						
536					90% Chebyshev(Mean, Sd) UCL	15.83			95% Chebyshev(Mean, Sd) UCL	17.3		
537					97.5% Chebyshev(Mean, Sd) UCL	19.35			99% Chebyshev(Mean, Sd) UCL	23.37		
538												
539	**Suggested UCL to Use**											
540					95% Student's-t UCL	14.4			or 95% Modified-t UCL	14.52		
541												
542	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
543	Recommendations are based upon data size, data distribution, and skewness.											
544	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
545	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Uncensored Full Data Sets**											
2	**PARC Area 5**											
3	User Selected Options											
4												
5	From File	WorkSheet_b.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**Lead**											
12												
13	**General Statistics**											
14	Total Number of Observations	12					Number of Distinct Observations	10				
15							Number of Missing Observations	0				
16	Minimum	2					Mean	52.25				
17	Maximum	190					Median	34				
18	SD	54.77					Std. Error of Mean	15.81				
19	Coefficient of Variation	1.048					Skewness	1.655				
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic	0.824					**Shapiro Wilk GOF Test**					
23	5% Shapiro Wilk Critical Value	0.859					Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic	0.216					**Lilliefors GOF Test**					
25	5% Lilliefors Critical Value	0.243					Data appear Normal at 5% Significance Level					
26	**Data appear Approximate Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL	80.64					95% Adjusted-CLT UCL (Chen-1995)	86.33				
31							95% Modified-t UCL (Johnson-1978)	81.9				
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic	0.288					**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value	0.761					Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic	0.145					**Kolmogorov-Smirnov Gamma GOF Test**					
37	5% K-S Critical Value	0.253					Detected data appear Gamma Distributed at 5% Significance Level					
38	**Detected data appear Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)	0.89					k star (bias corrected MLE)	0.723				
42	Theta hat (MLE)	58.68					Theta star (bias corrected MLE)	72.23				
43	nu hat (MLE)	21.37					nu star (bias corrected)	17.36				
44	MLE Mean (bias corrected)	52.25					MLE Sd (bias corrected)	61.43				
45							Approximate Chi Square Value (0.05)	8.93				
46	Adjusted Level of Significance	0.029					Adjusted Chi Square Value	8.023				
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))	101.6					95% Adjusted Gamma UCL (use when n<50)	113.1				
50												

51	**Lognormal GOF Test**											
52					Shapiro Wilk Test Statistic	0.895	**Shapiro Wilk Lognormal GOF Test**					
53					5% Shapiro Wilk Critical Value	0.859	Data appear Lognormal at 5% Significance Level					
54					Lilliefors Test Statistic	0.206	**Lilliefors Lognormal GOF Test**					
55					5% Lilliefors Critical Value	0.243	Data appear Lognormal at 5% Significance Level					
56	**Data appear Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	0.693	Mean of logged Data	3.299				
60					Maximum of Logged Data	5.247	SD of logged Data	1.428				
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	376.9	90% Chebyshev (MVUE) UCL	153.1				
64					95% Chebyshev (MVUE) UCL	193	97.5% Chebyshev (MVUE) UCL	248.3				
65					99% Chebyshev (MVUE) UCL	357						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	78.25	95% Jackknife UCL	80.64				
72					95% Standard Bootstrap UCL	77.09	95% Bootstrap-t UCL	101.5				
73					95% Hall's Bootstrap UCL	208.1	95% Percentile Bootstrap UCL	78.33				
74					95% BCA Bootstrap UCL	84.25						
75					90% Chebyshev(Mean, Sd) UCL	99.68	95% Chebyshev(Mean, Sd) UCL	121.2				
76					97.5% Chebyshev(Mean, Sd) UCL	151	99% Chebyshev(Mean, Sd) UCL	209.6				
77												
78	**Suggested UCL to Use**											
79					95% Student's-t UCL	80.64						
80												
81	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
82	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
83												
84	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
85	Recommendations are based upon data size, data distribution, and skewness.											
86	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
88												
89												

90	**Zinc**											
91												
92	**General Statistics**											
93				Total Number of Observations		12			Number of Distinct Observations		12	
94									Number of Missing Observations		0	
95				Minimum		11			Mean		59.75	
96				Maximum		137			Median		56.5	
97				SD		37.7			Std. Error of Mean		10.88	
98				Coefficient of Variation		0.631			Skewness		0.613	
99												
100	**Normal GOF Test**											
101				Shapiro Wilk Test Statistic		0.953			**Shapiro Wilk GOF Test**			
102				5% Shapiro Wilk Critical Value		0.859			Data appear Normal at 5% Significance Level			
103				Lilliefors Test Statistic		0.126			**Lilliefors GOF Test**			
104				5% Lilliefors Critical Value		0.243			Data appear Normal at 5% Significance Level			
105	**Data appear Normal at 5% Significance Level**											
106												
107	**Assuming Normal Distribution**											
108				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
109				95% Student's-t UCL		79.3			95% Adjusted-CLT UCL (Chen-1995)		79.71	
110									95% Modified-t UCL (Johnson-1978)		79.62	
111												
112	**Gamma GOF Test**											
113				A-D Test Statistic		0.222			**Anderson-Darling Gamma GOF Test**			
114				5% A-D Critical Value		0.741			Detected data appear Gamma Distributed at 5% Significance Level			
115				K-S Test Statistic		0.138			**Kolmogorov-Smirnov Gamma GOF Test**			
116				5% K-S Critical Value		0.248			Detected data appear Gamma Distributed at 5% Significance Level			
117	**Detected data appear Gamma Distributed at 5% Significance Level**											
118												
119	**Gamma Statistics**											
120				k hat (MLE)		2.34			k star (bias corrected MLE)		1.81	
121				Theta hat (MLE)		25.54			Theta star (bias corrected MLE)		33.01	
122				nu hat (MLE)		56.15			nu star (bias corrected)		43.45	
123				MLE Mean (bias corrected)		59.75			MLE Sd (bias corrected)		44.41	
124									Approximate Chi Square Value (0.05)		29.33	
125				Adjusted Level of Significance		0.029			Adjusted Chi Square Value		27.57	
126												
127	**Assuming Gamma Distribution**											
128				95% Approximate Gamma UCL (use when n>=50))		88.5			95% Adjusted Gamma UCL (use when n<50)		94.15	
129												

130	**Lognormal GOF Test**											
131					Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk Lognormal GOF Test**					
132					5% Shapiro Wilk Critical Value	0.859	Data appear Lognormal at 5% Significance Level					
133					Lilliefors Test Statistic	0.182	**Lilliefors Lognormal GOF Test**					
134					5% Lilliefors Critical Value	0.243	Data appear Lognormal at 5% Significance Level					
135	**Data appear Lognormal at 5% Significance Level**											
136												
137	**Lognormal Statistics**											
138					Minimum of Logged Data	2.398	Mean of logged Data	3.861				
139					Maximum of Logged Data	4.92	SD of logged Data	0.766				
140												
141	**Assuming Lognormal Distribution**											
142					95% H-UCL	114	90% Chebyshev (MVUE) UCL	104.9				
143					95% Chebyshev (MVUE) UCL	124.4	97.5% Chebyshev (MVUE) UCL	151.5				
144					99% Chebyshev (MVUE) UCL	204.6						
145												
146	**Nonparametric Distribution Free UCL Statistics**											
147	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
148												
149	**Nonparametric Distribution Free UCLs**											
150					95% CLT UCL	77.65	95% Jackknife UCL	79.3				
151					95% Standard Bootstrap UCL	76.87	95% Bootstrap-t UCL	80.92				
152					95% Hall's Bootstrap UCL	81.44	95% Percentile Bootstrap UCL	77.25				
153					95% BCA Bootstrap UCL	77.92						
154					90% Chebyshev(Mean, Sd) UCL	92.4	95% Chebyshev(Mean, Sd) UCL	107.2				
155					97.5% Chebyshev(Mean, Sd) UCL	127.7	99% Chebyshev(Mean, Sd) UCL	168				
156												
157	**Suggested UCL to Use**											
158					95% Student's-t UCL	79.3						
159												
160	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
161	Recommendations are based upon data size, data distribution, and skewness.											
162	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
163	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
164												

UCL Statistics for Uncensored Full Data Sets

PARC Area 6

User Selected Options	
From File	WorkSheet_c.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Antimony

General Statistics

Total Number of Observations	95	Number of Distinct Observations	18
		Number of Missing Observations	9
Minimum	1	Mean	8.493
Maximum	478	Median	1
SD	49.99	Std. Error of Mean	5.129
Coefficient of Variation	5.887	Skewness	9.067

Normal GOF Test

Shapiro Wilk Test Statistic	0.163	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.446	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0911	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	17.01	95% Adjusted-CLT UCL (Chen-1995)	22.03
		95% Modified-t UCL (Johnson-1978)	17.81

Gamma GOF Test

A-D Test Statistic	27.04	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.846	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.474	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.0986	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.386	k star (bias corrected MLE)	0.381
Theta hat (MLE)	21.98	Theta star (bias corrected MLE)	22.28
nu hat (MLE)	73.42	nu star (bias corrected)	72.44
MLE Mean (bias corrected)	8.493	MLE Sd (bias corrected)	13.75
		Approximate Chi Square Value (0.05)	53.84
Adjusted Level of Significance	0.0475	Adjusted Chi Square Value	53.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	11.43	95% Adjusted Gamma UCL (use when n<50)	11.48

	A	B	C	D	E	F	G	H	I	J	K	L
51	**Lognormal GOF Test**											
52					Shapiro Wilk Test Statistic	0.481	**Shapiro Wilk Lognormal GOF Test**					
53					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
54					Lilliefors Test Statistic	0.466	**Lilliefors Lognormal GOF Test**					
55					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	0				Mean of logged Data	0.427	
60					Maximum of Logged Data	6.17				SD of logged Data	1.07	
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	3.507				90% Chebyshev (MVUE) UCL	3.773	
64					95% Chebyshev (MVUE) UCL	4.263				97.5% Chebyshev (MVUE) UCL	4.944	
65					99% Chebyshev (MVUE) UCL	6.281						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data do not follow a Discernible Distribution (0.05)**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	16.93				95% Jackknife UCL	17.01	
72					95% Standard Bootstrap UCL	16.84				95% Bootstrap-t UCL	66.81	
73					95% Hall's Bootstrap UCL	58.67				95% Percentile Bootstrap UCL	18.12	
74					95% BCA Bootstrap UCL	24.49						
75					90% Chebyshev(Mean, Sd) UCL	23.88				95% Chebyshev(Mean, Sd) UCL	30.85	
76					97.5% Chebyshev(Mean, Sd) UCL	40.52				99% Chebyshev(Mean, Sd) UCL	59.53	
77												
78	**Suggested UCL to Use**											
79					95% Chebyshev (Mean, Sd) UCL	30.85						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86												

87	**Arsenic**											
88												
89	**General Statistics**											
90					Total Number of Observations	95			Number of Distinct Observations	41		
91									Number of Missing Observations	9		
92					Minimum	0.84			Mean	4.146		
93					Maximum	27			Median	1.9		
94					SD	5.404			Std. Error of Mean	0.554		
95					Coefficient of Variation	1.303			Skewness	2.365		
96												
97	**Normal GOF Test**											
98					Shapiro Wilk Test Statistic	0.642			**Shapiro Wilk GOF Test**			
99					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
100					Lilliefors Test Statistic	0.307			**Lilliefors GOF Test**			
101					5% Lilliefors Critical Value	0.0911			Data Not Normal at 5% Significance Level			
102	**Data Not Normal at 5% Significance Level**											
103												
104	**Assuming Normal Distribution**											
105					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
106					95% Student's-t UCL	5.067			95% Adjusted-CLT UCL (Chen-1995)	5.202		
107									95% Modified-t UCL (Johnson-1978)	5.09		
108												
109	**Gamma GOF Test**											
110					A-D Test Statistic	8.018			**Anderson-Darling Gamma GOF Test**			
111					5% A-D Critical Value	0.782			Data Not Gamma Distributed at 5% Significance Level			
112					K-S Test Statistic	0.234			**Kolmogorov-Smirnov Gamma GOF Test**			
113					5% K-S Critical Value	0.0945			Data Not Gamma Distributed at 5% Significance Level			
114	**Data Not Gamma Distributed at 5% Significance Level**											
115												
116	**Gamma Statistics**											
117					k hat (MLE)	1.019			k star (bias corrected MLE)	0.994		
118					Theta hat (MLE)	4.07			Theta star (bias corrected MLE)	4.173		
119					nu hat (MLE)	193.6			nu star (bias corrected)	188.8		
120					MLE Mean (bias corrected)	4.146			MLE Sd (bias corrected)	4.159		
121									Approximate Chi Square Value (0.05)	158		
122					Adjusted Level of Significance	0.0475			Adjusted Chi Square Value	157.6		
123												
124	**Assuming Gamma Distribution**											
125					95% Approximate Gamma UCL (use when n>=50))	4.954			95% Adjusted Gamma UCL (use when n<50)	4.968		
126												

	A	B	C	D	E	F	G	H	I	J	K	L
127	**Lognormal GOF Test**											
128					Shapiro Wilk Test Statistic	0.819	**Shapiro Wilk Lognormal GOF Test**					
129					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
130					Lilliefors Test Statistic	0.178	**Lilliefors Lognormal GOF Test**					
131					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
132	**Data Not Lognormal at 5% Significance Level**											
133												
134	**Lognormal Statistics**											
135					Minimum of Logged Data	-0.174				Mean of logged Data		0.857
136					Maximum of Logged Data	3.296				SD of logged Data		0.979
137												
138	**Assuming Lognormal Distribution**											
139					95% H-UCL	4.763				90% Chebyshev (MVUE) UCL		5.129
140					95% Chebyshev (MVUE) UCL	5.742				97.5% Chebyshev (MVUE) UCL		6.593
141					99% Chebyshev (MVUE) UCL	8.266						
142												
143	**Nonparametric Distribution Free UCL Statistics**											
144	**Data do not follow a Discernible Distribution (0.05)**											
145												
146	**Nonparametric Distribution Free UCLs**											
147					95% CLT UCL	5.058				95% Jackknife UCL		5.067
148					95% Standard Bootstrap UCL	5.047				95% Bootstrap-t UCL		5.279
149					95% Hall's Bootstrap UCL	5.224				95% Percentile Bootstrap UCL		5.111
150					95% BCA Bootstrap UCL	5.197						
151					90% Chebyshev(Mean, Sd) UCL	5.81				95% Chebyshev(Mean, Sd) UCL		6.563
152					97.5% Chebyshev(Mean, Sd) UCL	7.609				99% Chebyshev(Mean, Sd) UCL		9.663
153												
154	**Suggested UCL to Use**											
155					95% Chebyshev (Mean, Sd) UCL	6.563						
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												
162												

163	**Barium**											
164												
165						**General Statistics**							
166						Total Number of Observations	95				Number of Distinct Observations	73
167											Number of Missing Observations	9
168						Minimum	18				Mean	176.4
169						Maximum	2221				Median	75
170						SD	346.7				Std. Error of Mean	35.57
171						Coefficient of Variation	1.965				Skewness	4.559
172												
173						**Normal GOF Test**						
174						Shapiro Wilk Test Statistic	0.422			**Shapiro Wilk GOF Test**		
175						5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level		
176						Lilliefors Test Statistic	0.347			**Lilliefors GOF Test**		
177						5% Lilliefors Critical Value	0.0911			Data Not Normal at 5% Significance Level		
178						**Data Not Normal at 5% Significance Level**						
179												
180						**Assuming Normal Distribution**						
181						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
182						95% Student's-t UCL	235.5			95% Adjusted-CLT UCL (Chen-1995)	252.7	
183										95% Modified-t UCL (Johnson-1978)	238.3	
184												
185						**Gamma GOF Test**						
186						A-D Test Statistic	8.092			**Anderson-Darling Gamma GOF Test**		
187						5% A-D Critical Value	0.788			Data Not Gamma Distributed at 5% Significance Level		
188						K-S Test Statistic	0.233			**Kolmogorov-Smirnov Gamma GOF Test**		
189						5% K-S Critical Value	0.0949			Data Not Gamma Distributed at 5% Significance Level		
190						**Data Not Gamma Distributed at 5% Significance Level**						
191												
192						**Gamma Statistics**						
193						k hat (MLE)	0.894			k star (bias corrected MLE)	0.873	
194						Theta hat (MLE)	197.3			Theta star (bias corrected MLE)	202.1	
195						nu hat (MLE)	169.9			nu star (bias corrected)	165.9	
196						MLE Mean (bias corrected)	176.4			MLE Sd (bias corrected)	188.8	
197										Approximate Chi Square Value (0.05)	137.1	
198						Adjusted Level of Significance	0.0475			Adjusted Chi Square Value	136.7	
199												
200						**Assuming Gamma Distribution**						
201						95% Approximate Gamma UCL (use when n>=50))	213.5			95% Adjusted Gamma UCL (use when n<50)	214.1	
202												

	A	B	C	D	E	F	G	H	I	J	K	L
203	**Lognormal GOF Test**											
204					Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk Lognormal GOF Test**					
205					5% Shapiro Wilk P Value	3.3153E-8	Data Not Lognormal at 5% Significance Level					
206					Lilliefors Test Statistic	0.134	**Lilliefors Lognormal GOF Test**					
207					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
208	**Data Not Lognormal at 5% Significance Level**											
209												
210	**Lognormal Statistics**											
211					Minimum of Logged Data	2.89			Mean of logged Data	4.519		
212					Maximum of Logged Data	7.706			SD of logged Data	0.95		
213												
214	**Assuming Lognormal Distribution**											
215					95% H-UCL	178.8			90% Chebyshev (MVUE) UCL	192.5		
216					95% Chebyshev (MVUE) UCL	214.9			97.5% Chebyshev (MVUE) UCL	246		
217					99% Chebyshev (MVUE) UCL	307.1						
218												
219	**Nonparametric Distribution Free UCL Statistics**											
220	**Data do not follow a Discernible Distribution (0.05)**											
221												
222	**Nonparametric Distribution Free UCLs**											
223					95% CLT UCL	234.9			95% Jackknife UCL	235.5		
224					95% Standard Bootstrap UCL	233.5			95% Bootstrap-t UCL	276.6		
225					95% Hall's Bootstrap UCL	263.6			95% Percentile Bootstrap UCL	239		
226					95% BCA Bootstrap UCL	251.5						
227					90% Chebyshev(Mean, Sd) UCL	283.2			95% Chebyshev(Mean, Sd) UCL	331.5		
228					97.5% Chebyshev(Mean, Sd) UCL	398.6			99% Chebyshev(Mean, Sd) UCL	530.4		
229												
230	**Suggested UCL to Use**											
231					95% Chebyshev (Mean, Sd) UCL	331.5						
232												
233	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
234	Recommendations are based upon data size, data distribution, and skewness.											
235	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
236	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
237												
238												

239	**Cadmium**											
240												
241						**General Statistics**						
242					Total Number of Observations	95			Number of Distinct Observations	24		
243									Number of Missing Observations	9		
244					Minimum	0.5			Mean	1.364		
245					Maximum	15			Median	0.5		
246					SD	2.271			Std. Error of Mean	0.233		
247					Coefficient of Variation	1.665			Skewness	4.295		
248												
249						**Normal GOF Test**						
250					Shapiro Wilk Test Statistic	0.446			**Shapiro Wilk GOF Test**			
251					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
252					Lilliefors Test Statistic	0.352			**Lilliefors GOF Test**			
253					5% Lilliefors Critical Value	0.0911			Data Not Normal at 5% Significance Level			
254						**Data Not Normal at 5% Significance Level**						
255												
256						**Assuming Normal Distribution**						
257					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
258					95% Student's-t UCL	1.751			95% Adjusted-CLT UCL (Chen-1995)	1.857		
259									95% Modified-t UCL (Johnson-1978)	1.768		
260												
261						**Gamma GOF Test**						
262					A-D Test Statistic	15.63			**Anderson-Darling Gamma GOF Test**			
263					5% A-D Critical Value	0.78			Data Not Gamma Distributed at 5% Significance Level			
264					K-S Test Statistic	0.388			**Kolmogorov-Smirnov Gamma GOF Test**			
265					5% K-S Critical Value	0.0944			Data Not Gamma Distributed at 5% Significance Level			
266						**Data Not Gamma Distributed at 5% Significance Level**						
267												
268						**Gamma Statistics**						
269					k hat (MLE)	1.104			k star (bias corrected MLE)	1.076		
270					Theta hat (MLE)	1.235			Theta star (bias corrected MLE)	1.267		
271					nu hat (MLE)	209.8			nu star (bias corrected)	204.5		
272					MLE Mean (bias corrected)	1.364			MLE Sd (bias corrected)	1.315		
273									Approximate Chi Square Value (0.05)	172.4		
274					Adjusted Level of Significance	0.0475			Adjusted Chi Square Value	172		
275												
276						**Assuming Gamma Distribution**						
277					95% Approximate Gamma UCL (use when n>=50))	1.618			95% Adjusted Gamma UCL (use when n<50)	1.622		
278												

	A	B	C	D	E	F	G	H	I	J	K	L
279	**Lognormal GOF Test**											
280				Shapiro Wilk Test Statistic		0.649	**Shapiro Wilk Lognormal GOF Test**					
281				5% Shapiro Wilk P Value		0	Data Not Lognormal at 5% Significance Level					
282				Lilliefors Test Statistic		0.395	**Lilliefors Lognormal GOF Test**					
283				5% Lilliefors Critical Value		0.0911	Data Not Lognormal at 5% Significance Level					
284	**Data Not Lognormal at 5% Significance Level**											
285												
286	**Lognormal Statistics**											
287				Minimum of Logged Data		-0.693				Mean of logged Data		-0.206
288				Maximum of Logged Data		2.708				SD of logged Data		0.831
289												
290	**Assuming Lognormal Distribution**											
291				95% H-UCL		1.375				90% Chebyshev (MVUE) UCL		1.478
292				95% Chebyshev (MVUE) UCL		1.629				97.5% Chebyshev (MVUE) UCL		1.84
293				99% Chebyshev (MVUE) UCL		2.252						
294												
295	**Nonparametric Distribution Free UCL Statistics**											
296	**Data do not follow a Discernible Distribution (0.05)**											
297												
298	**Nonparametric Distribution Free UCLs**											
299				95% CLT UCL		1.748				95% Jackknife UCL		1.751
300				95% Standard Bootstrap UCL		1.747				95% Bootstrap-t UCL		1.987
301				95% Hall's Bootstrap UCL		2.11				95% Percentile Bootstrap UCL		1.774
302				95% BCA Bootstrap UCL		1.911						
303				90% Chebyshev(Mean, Sd) UCL		2.063				95% Chebyshev(Mean, Sd) UCL		2.38
304				97.5% Chebyshev(Mean, Sd) UCL		2.82				99% Chebyshev(Mean, Sd) UCL		3.683
305												
306	**Suggested UCL to Use**											
307				95% Chebyshev (Mean, Sd) UCL		2.38						
308												
309	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
310	Recommendations are based upon data size, data distribution, and skewness.											
311	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
312	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
313												
314												

315	**Copper**											
316												
317	**General Statistics**											
318				Total Number of Observations		95			Number of Distinct Observations		74	
319									Number of Missing Observations		9	
320				Minimum		1			Mean		123.8	
321				Maximum		2930			Median		13	
322				SD		361.7			Std. Error of Mean		37.11	
323				Coefficient of Variation		2.922			Skewness		5.819	
324												
325	**Normal GOF Test**											
326				Shapiro Wilk Test Statistic		0.383			**Shapiro Wilk GOF Test**			
327				5% Shapiro Wilk P Value		0			Data Not Normal at 5% Significance Level			
328				Lilliefors Test Statistic		0.367			**Lilliefors GOF Test**			
329				5% Lilliefors Critical Value		0.0911			Data Not Normal at 5% Significance Level			
330	**Data Not Normal at 5% Significance Level**											
331												
332	**Assuming Normal Distribution**											
333				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
334				95% Student's-t UCL		185.5			95% Adjusted-CLT UCL (Chen-1995)		208.5	
335									95% Modified-t UCL (Johnson-1978)		189.2	
336												
337	**Gamma GOF Test**											
338				A-D Test Statistic		9.005			**Anderson-Darling Gamma GOF Test**			
339				5% A-D Critical Value		0.849			Data Not Gamma Distributed at 5% Significance Level			
340				K-S Test Statistic		0.266			**Kolmogorov-Smirnov Gamma GOF Test**			
341				5% K-S Critical Value		0.0987			Data Not Gamma Distributed at 5% Significance Level			
342	**Data Not Gamma Distributed at 5% Significance Level**											
343												
344	**Gamma Statistics**											
345				k hat (MLE)		0.375			k star (bias corrected MLE)		0.37	
346				Theta hat (MLE)		329.9			Theta star (bias corrected MLE)		334.3	
347				nu hat (MLE)		71.3			nu star (bias corrected)		70.38	
348				MLE Mean (bias corrected)		123.8			MLE Sd (bias corrected)		203.4	
349									Approximate Chi Square Value (0.05)		52.07	
350				Adjusted Level of Significance		0.0475			Adjusted Chi Square Value		51.82	
351												
352	**Assuming Gamma Distribution**											
353				95% Approximate Gamma UCL (use when n>=50))		167.4			95% Adjusted Gamma UCL (use when n<50)		168.1	
354												

	A	B	C	D	E	F	G	H	I	J	K	L
355	**Lognormal GOF Test**											
356					Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk Lognormal GOF Test**					
357					5% Shapiro Wilk P Value	8.1385E-8	Data Not Lognormal at 5% Significance Level					
358					Lilliefors Test Statistic	0.153	**Lilliefors Lognormal GOF Test**					
359					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
360	**Data Not Lognormal at 5% Significance Level**											
361												
362	**Lognormal Statistics**											
363					Minimum of Logged Data	0				Mean of logged Data	3.047	
364					Maximum of Logged Data	7.983				SD of logged Data	1.705	
365												
366	**Assuming Lognormal Distribution**											
367					95% H-UCL	153.5				90% Chebyshev (MVUE) UCL	153.5	
368					95% Chebyshev (MVUE) UCL	183.6				97.5% Chebyshev (MVUE) UCL	225.5	
369					99% Chebyshev (MVUE) UCL	307.7						
370												
371	**Nonparametric Distribution Free UCL Statistics**											
372	**Data do not follow a Discernible Distribution (0.05)**											
373												
374	**Nonparametric Distribution Free UCLs**											
375					95% CLT UCL	184.9				95% Jackknife UCL	185.5	
376					95% Standard Bootstrap UCL	183.6				95% Bootstrap-t UCL	255.4	
377					95% Hall's Bootstrap UCL	440.7				95% Percentile Bootstrap UCL	189.9	
378					95% BCA Bootstrap UCL	216.8						
379					90% Chebyshev(Mean, Sd) UCL	235.1				95% Chebyshev(Mean, Sd) UCL	285.6	
380					97.5% Chebyshev(Mean, Sd) UCL	355.6				99% Chebyshev(Mean, Sd) UCL	493.1	
381												
382	**Suggested UCL to Use**											
383					95% Chebyshev (Mean, Sd) UCL	285.6						
384												
385	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
386	Recommendations are based upon data size, data distribution, and skewness.											
387	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
388	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
389												
390												

391	**Lead**											
392												
393	**General Statistics**											
394				Total Number of Observations		96			Number of Distinct Observations		78	
395									Number of Missing Observations		8	
396				Minimum		1			Mean		726.5	
397				Maximum		17028			Median		21	
398				SD		2501			Std. Error of Mean		255.2	
399				Coefficient of Variation		3.442			Skewness		5.256	
400												
401	**Normal GOF Test**											
402				Shapiro Wilk Test Statistic		0.332			**Shapiro Wilk GOF Test**			
403				5% Shapiro Wilk P Value		0			Data Not Normal at 5% Significance Level			
404				Lilliefors Test Statistic		0.386			**Lilliefors GOF Test**			
405				5% Lilliefors Critical Value		0.0907			Data Not Normal at 5% Significance Level			
406	**Data Not Normal at 5% Significance Level**											
407												
408	**Assuming Normal Distribution**											
409				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
410				95% Student's-t UCL		1150			95% Adjusted-CLT UCL (Chen-1995)		1293	
411									95% Modified-t UCL (Johnson-1978)		1173	
412												
413	**Gamma GOF Test**											
414				A-D Test Statistic		7.257			**Anderson-Darling Gamma GOF Test**			
415				5% A-D Critical Value		0.904			Data Not Gamma Distributed at 5% Significance Level			
416				K-S Test Statistic		0.216			**Kolmogorov-Smirnov Gamma GOF Test**			
417				5% K-S Critical Value		0.101			Data Not Gamma Distributed at 5% Significance Level			
418	**Data Not Gamma Distributed at 5% Significance Level**											
419												
420	**Gamma Statistics**											
421				k hat (MLE)		0.227			k star (bias corrected MLE)		0.226	
422				Theta hat (MLE)		3206			Theta star (bias corrected MLE)		3208	
423				nu hat (MLE)		43.5			nu star (bias corrected)		43.47	
424				MLE Mean (bias corrected)		726.5			MLE Sd (bias corrected)		1527	
425									Approximate Chi Square Value (0.05)		29.35	
426				Adjusted Level of Significance		0.0475			Adjusted Chi Square Value		29.18	
427												
428	**Assuming Gamma Distribution**											
429				95% Approximate Gamma UCL (use when n>=50))		1076			95% Adjusted Gamma UCL (use when n<50)		1082	
430												

	A	B	C	D	E	F	G	H	I	J	K	L
431	**Lognormal GOF Test**											
432				Shapiro Wilk Test Statistic		0.918	**Shapiro Wilk Lognormal GOF Test**					
433				5% Shapiro Wilk P Value		1.6112E-6	Data Not Lognormal at 5% Significance Level					
434				Lilliefors Test Statistic		0.0993	**Lilliefors Lognormal GOF Test**					
435				5% Lilliefors Critical Value		0.0907	Data Not Lognormal at 5% Significance Level					
436	**Data Not Lognormal at 5% Significance Level**											
437												
438	**Lognormal Statistics**											
439				Minimum of Logged Data		0				Mean of logged Data		3.403
440				Maximum of Logged Data		9.743				SD of logged Data		2.647
441												
442	**Assuming Lognormal Distribution**											
443				95% H-UCL		3179				90% Chebyshev (MVUE) UCL		2091
444				95% Chebyshev (MVUE) UCL		2649				97.5% Chebyshev (MVUE) UCL		3424
445				99% Chebyshev (MVUE) UCL		4945						
446												
447	**Nonparametric Distribution Free UCL Statistics**											
448	**Data do not follow a Discernible Distribution (0.05)**											
449												
450	**Nonparametric Distribution Free UCLs**											
451				95% CLT UCL		1146				95% Jackknife UCL		1150
452				95% Standard Bootstrap UCL		1141				95% Bootstrap-t UCL		1734
453				95% Hall's Bootstrap UCL		1518				95% Percentile Bootstrap UCL		1169
454				95% BCA Bootstrap UCL		1385						
455				90% Chebyshev(Mean, Sd) UCL		1492				95% Chebyshev(Mean, Sd) UCL		1839
456				97.5% Chebyshev(Mean, Sd) UCL		2320				99% Chebyshev(Mean, Sd) UCL		3266
457												
458	**Suggested UCL to Use**											
459				95% Chebyshev (Mean, Sd) UCL		1839						
460												
461	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
462	Recommendations are based upon data size, data distribution, and skewness.											
463	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
464	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
465												
466												

467	**Mercury**											
468												
469	**General Statistics**											
470				Total Number of Observations		95			Number of Distinct Observations		46	
471									Number of Missing Observations		9	
472				Minimum		0.063			Mean		0.33	
473				Maximum		4.9			Median		0.116	
474				SD		0.583			Std. Error of Mean		0.0598	
475				Coefficient of Variation		1.767			Skewness		5.608	
476												
477	**Normal GOF Test**											
478				Shapiro Wilk Test Statistic		0.457			**Shapiro Wilk GOF Test**			
479				5% Shapiro Wilk P Value		0			Data Not Normal at 5% Significance Level			
480				Lilliefors Test Statistic		0.324			**Lilliefors GOF Test**			
481				5% Lilliefors Critical Value		0.0911			Data Not Normal at 5% Significance Level			
482	**Data Not Normal at 5% Significance Level**											
483												
484	**Assuming Normal Distribution**											
485				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
486				95% Student's-t UCL		0.429			95% Adjusted-CLT UCL (Chen-1995)		0.465	
487									95% Modified-t UCL (Johnson-1978)		0.435	
488												
489	**Gamma GOF Test**											
490				A-D Test Statistic		10.69			**Anderson-Darling Gamma GOF Test**			
491				5% A-D Critical Value		0.783			Data Not Gamma Distributed at 5% Significance Level			
492				K-S Test Statistic		0.263			**Kolmogorov-Smirnov Gamma GOF Test**			
493				5% K-S Critical Value		0.0945			Data Not Gamma Distributed at 5% Significance Level			
494	**Data Not Gamma Distributed at 5% Significance Level**											
495												
496	**Gamma Statistics**											
497				k hat (MLE)		1.014			k star (bias corrected MLE)		0.989	
498				Theta hat (MLE)		0.325			Theta star (bias corrected MLE)		0.334	
499				nu hat (MLE)		192.7			nu star (bias corrected)		187.9	
500				MLE Mean (bias corrected)		0.33			MLE Sd (bias corrected)		0.332	
501									Approximate Chi Square Value (0.05)		157.2	
502				Adjusted Level of Significance		0.0475			Adjusted Chi Square Value		156.8	
503												
504	**Assuming Gamma Distribution**											
505				95% Approximate Gamma UCL (use when n>=50))		0.394			95% Adjusted Gamma UCL (use when n<50)		0.395	
506												

	A	B	C	D	E	F	G	H	I	J	K	L
507	**Lognormal GOF Test**											
508					Shapiro Wilk Test Statistic	0.787	**Shapiro Wilk Lognormal GOF Test**					
509					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
510					Lilliefors Test Statistic	0.245	**Lilliefors Lognormal GOF Test**					
511					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
512	**Data Not Lognormal at 5% Significance Level**											
513												
514	**Lognormal Statistics**											
515					Minimum of Logged Data	-2.765				Mean of logged Data	-1.677	
516					Maximum of Logged Data	1.589				SD of logged Data	0.9	
517												
518	**Assuming Lognormal Distribution**											
519					95% H-UCL	0.343				90% Chebyshev (MVUE) UCL	0.369	
520					95% Chebyshev (MVUE) UCL	0.409				97.5% Chebyshev (MVUE) UCL	0.466	
521					99% Chebyshev (MVUE) UCL	0.577						
522												
523	**Nonparametric Distribution Free UCL Statistics**											
524	**Data do not follow a Discernible Distribution (0.05)**											
525												
526	**Nonparametric Distribution Free UCLs**											
527					95% CLT UCL	0.428				95% Jackknife UCL	0.429	
528					95% Standard Bootstrap UCL	0.428				95% Bootstrap-t UCL	0.507	
529					95% Hall's Bootstrap UCL	0.848				95% Percentile Bootstrap UCL	0.438	
530					95% BCA Bootstrap UCL	0.471						
531					90% Chebyshev(Mean, Sd) UCL	0.509				95% Chebyshev(Mean, Sd) UCL	0.591	
532					97.5% Chebyshev(Mean, Sd) UCL	0.703				99% Chebyshev(Mean, Sd) UCL	0.925	
533												
534	**Suggested UCL to Use**											
535					95% Chebyshev (Mean, Sd) UCL	0.591						
536												
537	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
538	Recommendations are based upon data size, data distribution, and skewness.											
539	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
540	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
541												
542												

	A	B	C	D	E	F	G	H	I	J	K	L
543	**Nickel**											
544												
545						**General Statistics**						
546					Total Number of Observations	95			Number of Distinct Observations	61		
547									Number of Missing Observations	9		
548					Minimum	1.4			Mean	10.5		
549					Maximum	51			Median	7		
550					SD	10.46			Std. Error of Mean	1.074		
551					Coefficient of Variation	0.997			Skewness	2.276		
552												
553						**Normal GOF Test**						
554					Shapiro Wilk Test Statistic	0.704			**Shapiro Wilk GOF Test**			
555					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
556					Lilliefors Test Statistic	0.239			**Lilliefors GOF Test**			
557					5% Lilliefors Critical Value	0.0911			Data Not Normal at 5% Significance Level			
558						**Data Not Normal at 5% Significance Level**						
559												
560						**Assuming Normal Distribution**						
561					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
562					95% Student's-t UCL	12.28			95% Adjusted-CLT UCL (Chen-1995)	12.53		
563									95% Modified-t UCL (Johnson-1978)	12.32		
564												
565						**Gamma GOF Test**						
566					A-D Test Statistic	2.852			**Anderson-Darling Gamma GOF Test**			
567					5% A-D Critical Value	0.769			Data Not Gamma Distributed at 5% Significance Level			
568					K-S Test Statistic	0.145			**Kolmogorov-Smirnov Gamma GOF Test**			
569					5% K-S Critical Value	0.0934			Data Not Gamma Distributed at 5% Significance Level			
570						**Data Not Gamma Distributed at 5% Significance Level**						
571												
572						**Gamma Statistics**						
573					k hat (MLE)	1.62			k star (bias corrected MLE)	1.576		
574					Theta hat (MLE)	6.48			Theta star (bias corrected MLE)	6.661		
575					nu hat (MLE)	307.8			nu star (bias corrected)	299.4		
576					MLE Mean (bias corrected)	10.5			MLE Sd (bias corrected)	8.362		
577									Approximate Chi Square Value (0.05)	260.3		
578					Adjusted Level of Significance	0.0475			Adjusted Chi Square Value	259.8		
579												
580						**Assuming Gamma Distribution**						
581					95% Approximate Gamma UCL (use when n>=50))	12.07			95% Adjusted Gamma UCL (use when n<50)	12.1		
582												

583	**Lognormal GOF Test**											
584					Shapiro Wilk Test Statistic	0.959	**Shapiro Wilk Lognormal GOF Test**					
585					5% Shapiro Wilk P Value	0.0244	Data Not Lognormal at 5% Significance Level					
586					Lilliefors Test Statistic	0.0867	**Lilliefors Lognormal GOF Test**					
587					5% Lilliefors Critical Value	0.0911	Data appear Lognormal at 5% Significance Level					
588	**Data appear Approximate Lognormal at 5% Significance Level**											
589												
590	**Lognormal Statistics**											
591					Minimum of Logged Data	0.336	Mean of logged Data	2.012				
592					Maximum of Logged Data	3.932	SD of logged Data	0.786				
593												
594	**Assuming Lognormal Distribution**											
595					95% H-UCL	12.04	90% Chebyshev (MVUE) UCL	12.9				
596					95% Chebyshev (MVUE) UCL	14.16	97.5% Chebyshev (MVUE) UCL	15.9				
597					99% Chebyshev (MVUE) UCL	19.31						
598												
599	**Nonparametric Distribution Free UCL Statistics**											
600	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
601												
602	**Nonparametric Distribution Free UCLs**											
603					95% CLT UCL	12.26	95% Jackknife UCL	12.28				
604					95% Standard Bootstrap UCL	12.21	95% Bootstrap-t UCL	12.71				
605					95% Hall's Bootstrap UCL	12.58	95% Percentile Bootstrap UCL	12.38				
606					95% BCA Bootstrap UCL	12.48						
607					90% Chebyshev(Mean, Sd) UCL	13.72	95% Chebyshev(Mean, Sd) UCL	15.18				
608					97.5% Chebyshev(Mean, Sd) UCL	17.2	99% Chebyshev(Mean, Sd) UCL	21.18				
609												
610	**Suggested UCL to Use**											
611					95% H-UCL	12.04						
612												
613	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
614	Recommendations are based upon data size, data distribution, and skewness.											
615	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
616	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
617												
618	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
619	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
620	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
621	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
622												
623												

	A	B	C	D	E	F	G	H	I	J	K	L
624	**Selenium**											
625												
626						**General Statistics**							
627						Total Number of Observations	95				Number of Distinct Observations	11	
628											Number of Missing Observations	9	
629						Minimum	0.5				Mean	0.702	
630						Maximum	11				Median	0.5	
631						SD	1.109				Std. Error of Mean	0.114	
632						Coefficient of Variation	1.58				Skewness	8.739	
633													
634						**Normal GOF Test**							
635						Shapiro Wilk Test Statistic	0.203				**Shapiro Wilk GOF Test**		
636						5% Shapiro Wilk P Value	0				Data Not Normal at 5% Significance Level		
637						Lilliefors Test Statistic	0.457				**Lilliefors GOF Test**		
638						5% Lilliefors Critical Value	0.0911				Data Not Normal at 5% Significance Level		
639						**Data Not Normal at 5% Significance Level**							
640													
641						**Assuming Normal Distribution**							
642						**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**		
643						95% Student's-t UCL	0.891				95% Adjusted-CLT UCL (Chen-1995)	0.999	
644											95% Modified-t UCL (Johnson-1978)	0.908	
645													
646						**Gamma GOF Test**							
647						A-D Test Statistic	27.09				**Anderson-Darling Gamma GOF Test**		
648						5% A-D Critical Value	0.761				Data Not Gamma Distributed at 5% Significance Level		
649						K-S Test Statistic	0.503				**Kolmogorov-Smirnov Gamma GOF Test**		
650						5% K-S Critical Value	0.0927				Data Not Gamma Distributed at 5% Significance Level		
651						**Data Not Gamma Distributed at 5% Significance Level**							
652													
653						**Gamma Statistics**							
654						k hat (MLE)	2.586				k star (bias corrected MLE)	2.512	
655						Theta hat (MLE)	0.272				Theta star (bias corrected MLE)	0.28	
656						nu hat (MLE)	491.4				nu star (bias corrected)	477.2	
657						MLE Mean (bias corrected)	0.702				MLE Sd (bias corrected)	0.443	
658											Approximate Chi Square Value (0.05)	427.5	
659						Adjusted Level of Significance	0.0475				Adjusted Chi Square Value	426.8	
660													
661						**Assuming Gamma Distribution**							
662						95% Approximate Gamma UCL (use when n>=50))	0.784				95% Adjusted Gamma UCL (use when n<50)	0.785	
663													

	A	B	C	D	E	F	G	H	I	J	K	L
664	**Lognormal GOF Test**											
665					Shapiro Wilk Test Statistic	0.372	**Shapiro Wilk Lognormal GOF Test**					
666					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
667					Lilliefors Test Statistic	0.504	**Lilliefors Lognormal GOF Test**					
668					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
669	**Data Not Lognormal at 5% Significance Level**											
670												
671	**Lognormal Statistics**											
672					Minimum of Logged Data	-0.693				Mean of logged Data	-0.559	
673					Maximum of Logged Data	2.398				SD of logged Data	0.438	
674												
675	**Assuming Lognormal Distribution**											
676					95% H-UCL	0.683				90% Chebyshev (MVUE) UCL	0.717	
677					95% Chebyshev (MVUE) UCL	0.757				97.5% Chebyshev (MVUE) UCL	0.812	
678					99% Chebyshev (MVUE) UCL	0.922						
679												
680	**Nonparametric Distribution Free UCL Statistics**											
681	**Data do not follow a Discernible Distribution (0.05)**											
682												
683	**Nonparametric Distribution Free UCLs**											
684					95% CLT UCL	0.89				95% Jackknife UCL	0.891	
685					95% Standard Bootstrap UCL	0.886				95% Bootstrap-t UCL	1.402	
686					95% Hall's Bootstrap UCL	1.498				95% Percentile Bootstrap UCL	0.909	
687					95% BCA Bootstrap UCL	1.114						
688					90% Chebyshev(Mean, Sd) UCL	1.044				95% Chebyshev(Mean, Sd) UCL	1.198	
689					97.5% Chebyshev(Mean, Sd) UCL	1.413				99% Chebyshev(Mean, Sd) UCL	1.835	
690												
691	**Suggested UCL to Use**											
692					95% Student's-t UCL	0.891				or 95% Modified-t UCL	0.908	
693												
694	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
695	Recommendations are based upon data size, data distribution, and skewness.											
696	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
697	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
698												
699												

	A	B	C	D	E	F	G	H	I	J	K	L
700	**Silver**											
701												
702						**General Statistics**							
703						Total Number of Observations	95			Number of Distinct Observations	14	
704										Number of Missing Observations	9	
705						Minimum	0.1			Mean	0.331	
706						Maximum	13			Median	0.1	
707						SD	1.362			Std. Error of Mean	0.14	
708						Coefficient of Variation	4.121			Skewness	8.824	
709												
710						**Normal GOF Test**						
711						Shapiro Wilk Test Statistic	0.187			**Shapiro Wilk GOF Test**		
712						5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level		
713						Lilliefors Test Statistic	0.433			**Lilliefors GOF Test**		
714						5% Lilliefors Critical Value	0.0911			Data Not Normal at 5% Significance Level		
715						**Data Not Normal at 5% Significance Level**						
716												
717						**Assuming Normal Distribution**						
718						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
719						95% Student's-t UCL	0.563			95% Adjusted-CLT UCL (Chen-1995)	0.696	
720										95% Modified-t UCL (Johnson-1978)	0.584	
721												
722						**Gamma GOF Test**						
723						A-D Test Statistic	27.25			**Anderson-Darling Gamma GOF Test**		
724						5% A-D Critical Value	0.802			Data Not Gamma Distributed at 5% Significance Level		
725						K-S Test Statistic	0.513			**Kolmogorov-Smirnov Gamma GOF Test**		
726						5% K-S Critical Value	0.096			Data Not Gamma Distributed at 5% Significance Level		
727						**Data Not Gamma Distributed at 5% Significance Level**						
728												
729						**Gamma Statistics**						
730						k hat (MLE)	0.671			k star (bias corrected MLE)	0.657	
731						Theta hat (MLE)	0.492			Theta star (bias corrected MLE)	0.503	
732						nu hat (MLE)	127.6			nu star (bias corrected)	124.9	
733						MLE Mean (bias corrected)	0.331			MLE Sd (bias corrected)	0.408	
734										Approximate Chi Square Value (0.05)	100.1	
735						Adjusted Level of Significance	0.0475			Adjusted Chi Square Value	99.72	
736												
737						**Assuming Gamma Distribution**						
738						95% Approximate Gamma UCL (use when n>=50))	0.413			95% Adjusted Gamma UCL (use when n<50)	0.414	
739												

	A	B	C	D	E	F	G	H	I	J	K	L
740	**Lognormal GOF Test**											
741					Shapiro Wilk Test Statistic	0.424	**Shapiro Wilk Lognormal GOF Test**					
742					5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level					
743					Lilliefors Test Statistic	0.501	**Lilliefors Lognormal GOF Test**					
744					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
745	**Data Not Lognormal at 5% Significance Level**											
746												
747	**Lognormal Statistics**											
748					Minimum of Logged Data	-2.303				Mean of logged Data	-2.012	
749					Maximum of Logged Data	2.565				SD of logged Data	0.823	
750												
751	**Assuming Lognormal Distribution**											
752					95% H-UCL	0.224				90% Chebyshev (MVUE) UCL	0.241	
753					95% Chebyshev (MVUE) UCL	0.265				97.5% Chebyshev (MVUE) UCL	0.299	
754					99% Chebyshev (MVUE) UCL	0.366						
755												
756	**Nonparametric Distribution Free UCL Statistics**											
757	**Data do not follow a Discernible Distribution (0.05)**											
758												
759	**Nonparametric Distribution Free UCLs**											
760					95% CLT UCL	0.56				95% Jackknife UCL	0.563	
761					95% Standard Bootstrap UCL	0.566				95% Bootstrap-t UCL	1.537	
762					95% Hall's Bootstrap UCL	1.31				95% Percentile Bootstrap UCL	0.595	
763					95% BCA Bootstrap UCL	0.831						
764					90% Chebyshev(Mean, Sd) UCL	0.75				95% Chebyshev(Mean, Sd) UCL	0.94	
765					97.5% Chebyshev(Mean, Sd) UCL	1.203				99% Chebyshev(Mean, Sd) UCL	1.721	
766												
767	**Suggested UCL to Use**											
768					95% Chebyshev (Mean, Sd) UCL	0.94						
769												
770	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
771	Recommendations are based upon data size, data distribution, and skewness.											
772	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
773	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
774												
775												

	A	B	C	D	E	F	G	H	I	J	K	L
776	**Zinc**											
777												
778	**General Statistics**											
779					Total Number of Observations	95				Number of Distinct Observations		71
780										Number of Missing Observations		9
781					Minimum	11				Mean		631.5
782					Maximum	10576				Median		50
783					SD	1779				Std. Error of Mean		182.5
784					Coefficient of Variation	2.817				Skewness		4.361
785												
786	**Normal GOF Test**											
787					Shapiro Wilk Test Statistic	0.391			**Shapiro Wilk GOF Test**			
788					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
789					Lilliefors Test Statistic	0.364			**Lilliefors GOF Test**			
790					5% Lilliefors Critical Value	0.0911			Data Not Normal at 5% Significance Level			
791	**Data Not Normal at 5% Significance Level**											
792												
793	**Assuming Normal Distribution**											
794				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
795					95% Student's-t UCL	934.6				95% Adjusted-CLT UCL (Chen-1995)		1019
796										95% Modified-t UCL (Johnson-1978)		948.3
797												
798	**Gamma GOF Test**											
799					A-D Test Statistic	10.19			**Anderson-Darling Gamma GOF Test**			
800					5% A-D Critical Value	0.855			Data Not Gamma Distributed at 5% Significance Level			
801					K-S Test Statistic	0.289			**Kolmogorov-Smirnov Gamma GOF Test**			
802					5% K-S Critical Value	0.099			Data Not Gamma Distributed at 5% Significance Level			
803	**Data Not Gamma Distributed at 5% Significance Level**											
804												
805	**Gamma Statistics**											
806					k hat (MLE)	0.353				k star (bias corrected MLE)		0.349
807					Theta hat (MLE)	1790				Theta star (bias corrected MLE)		1811
808					nu hat (MLE)	67.05				nu star (bias corrected)		66.26
809					MLE Mean (bias corrected)	631.5				MLE Sd (bias corrected)		1069
810										Approximate Chi Square Value (0.05)		48.53
811					Adjusted Level of Significance	0.0475				Adjusted Chi Square Value		48.3
812												
813	**Assuming Gamma Distribution**											
814					95% Approximate Gamma UCL (use when n>=50))	862.2				95% Adjusted Gamma UCL (use when n<50)		866.4
815												

816	**Lognormal GOF Test**											
817					Shapiro Wilk Test Statistic	0.858	**Shapiro Wilk Lognormal GOF Test**					
818					5% Shapiro Wilk P Value	5.264E-13	Data Not Lognormal at 5% Significance Level					
819					Lilliefors Test Statistic	0.186	**Lilliefors Lognormal GOF Test**					
820					5% Lilliefors Critical Value	0.0911	Data Not Lognormal at 5% Significance Level					
821	**Data Not Lognormal at 5% Significance Level**											
822												
823	**Lognormal Statistics**											
824					Minimum of Logged Data	2.398				Mean of logged Data	4.545	
825					Maximum of Logged Data	9.266				SD of logged Data	1.752	
826												
827	**Assuming Lognormal Distribution**											
828					95% H-UCL	763.9				90% Chebyshev (MVUE) UCL	755	
829					95% Chebyshev (MVUE) UCL	906.7				97.5% Chebyshev (MVUE) UCL	1117	
830					99% Chebyshev (MVUE) UCL	1531						
831												
832	**Nonparametric Distribution Free UCL Statistics**											
833	**Data do not follow a Discernible Distribution (0.05)**											
834												
835	**Nonparametric Distribution Free UCLs**											
836					95% CLT UCL	931.7				95% Jackknife UCL	934.6	
837					95% Standard Bootstrap UCL	931.2				95% Bootstrap-t UCL	1116	
838					95% Hall's Bootstrap UCL	965.3				95% Percentile Bootstrap UCL	954.1	
839					95% BCA Bootstrap UCL	1045						
840					90% Chebyshev(Mean, Sd) UCL	1179				95% Chebyshev(Mean, Sd) UCL	1427	
841					97.5% Chebyshev(Mean, Sd) UCL	1771				99% Chebyshev(Mean, Sd) UCL	2447	
842												
843	**Suggested UCL to Use**											
844					95% Chebyshev (Mean, Sd) UCL	1427						
845												
846	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
847	Recommendations are based upon data size, data distribution, and skewness.											
848	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
849	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
850												
851												

	A	B	C	D	E	F	G	H	I	J	K	L
852	**TPH-GRO**											
853												
854						**General Statistics**						
855					Total Number of Observations	41			Number of Distinct Observations		6	
856									Number of Missing Observations		63	
857					Minimum	1.1			Mean		12.33	
858					Maximum	317			Median		5.3	
859					SD	48.95			Std. Error of Mean		7.645	
860					Coefficient of Variation	3.97			Skewness		6.332	
861												
862						**Normal GOF Test**						
863					Shapiro Wilk Test Statistic	0.205			**Shapiro Wilk GOF Test**			
864					5% Shapiro Wilk Critical Value	0.941			Data Not Normal at 5% Significance Level			
865					Lilliefors Test Statistic	0.462			**Lilliefors GOF Test**			
866					5% Lilliefors Critical Value	0.137			Data Not Normal at 5% Significance Level			
867						**Data Not Normal at 5% Significance Level**						
868												
869						**Assuming Normal Distribution**						
870					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
871					95% Student's-t UCL	25.2			95% Adjusted-CLT UCL (Chen-1995)		32.98	
872									95% Modified-t UCL (Johnson-1978)		26.46	
873												
874						**Gamma GOF Test**						
875					A-D Test Statistic	7.325			**Anderson-Darling Gamma GOF Test**			
876					5% A-D Critical Value	0.81			Data Not Gamma Distributed at 5% Significance Level			
877					K-S Test Statistic	0.428			**Kolmogorov-Smirnov Gamma GOF Test**			
878					5% K-S Critical Value	0.146			Data Not Gamma Distributed at 5% Significance Level			
879						**Data Not Gamma Distributed at 5% Significance Level**						
880												
881						**Gamma Statistics**						
882					k hat (MLE)	0.537			k star (bias corrected MLE)		0.514	
883					Theta hat (MLE)	22.98			Theta star (bias corrected MLE)		24.01	
884					nu hat (MLE)	44			nu star (bias corrected)		42.11	
885					MLE Mean (bias corrected)	12.33			MLE Sd (bias corrected)		17.2	
886									Approximate Chi Square Value (0.05)		28.24	
887					Adjusted Level of Significance	0.0441			Adjusted Chi Square Value		27.82	
888												
889						**Assuming Gamma Distribution**						
890					95% Approximate Gamma UCL (use when n>=50))	18.39			95% Adjusted Gamma UCL (use when n<50)		18.66	
891												

	A	B	C	D	E	F	G	H	I	J	K	L
892	**Lognormal GOF Test**											
893	Shapiro Wilk Test Statistic					0.728	**Shapiro Wilk Lognormal GOF Test**					
894	5% Shapiro Wilk Critical Value					0.941	Data Not Lognormal at 5% Significance Level					
895	Lilliefors Test Statistic					0.3	**Lilliefors Lognormal GOF Test**					
896	5% Lilliefors Critical Value					0.137	Data Not Lognormal at 5% Significance Level					
897	**Data Not Lognormal at 5% Significance Level**											
898												
899	**Lognormal Statistics**											
900	Minimum of Logged Data					0.0953				Mean of logged Data		1.341
901	Maximum of Logged Data					5.759				SD of logged Data		1.095
902												
903	**Assuming Lognormal Distribution**											
904	95% H-UCL					10.66				90% Chebyshev (MVUE) UCL		10.98
905	95% Chebyshev (MVUE) UCL					12.86				97.5% Chebyshev (MVUE) UCL		15.48
906	99% Chebyshev (MVUE) UCL					20.63						
907												
908	**Nonparametric Distribution Free UCL Statistics**											
909	**Data do not follow a Discernible Distribution (0.05)**											
910												
911	**Nonparametric Distribution Free UCLs**											
912	95% CLT UCL					24.9				95% Jackknife UCL		25.2
913	95% Standard Bootstrap UCL					24.8				95% Bootstrap-t UCL		180.3
914	95% Hall's Bootstrap UCL					93.15				95% Percentile Bootstrap UCL		27.34
915	95% BCA Bootstrap UCL					35.52						
916	90% Chebyshev(Mean, Sd) UCL					35.26				95% Chebyshev(Mean, Sd) UCL		45.65
917	97.5% Chebyshev(Mean, Sd) UCL					60.07				99% Chebyshev(Mean, Sd) UCL		88.39
918												
919	**Suggested UCL to Use**											
920	95% Chebyshev (Mean, Sd) UCL					45.65						
921												
922	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
923	Recommendations are based upon data size, data distribution, and skewness.											
924	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
925	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
926												
927												

	A	B	C	D	E	F	G	H	I	J	K	L
928	**TPH-DRO**											
929												
930						**General Statistics**						
931					Total Number of Observations	42			Number of Distinct Observations		8	
932									Number of Missing Observations		62	
933					Minimum	5.3			Mean		174.4	
934					Maximum	6980			Median		5.3	
935					SD	1076			Std. Error of Mean		166	
936					Coefficient of Variation	6.168			Skewness		6.481	
937												
938						**Normal GOF Test**						
939					Shapiro Wilk Test Statistic	0.16			**Shapiro Wilk GOF Test**			
940					5% Shapiro Wilk Critical Value	0.942			Data Not Normal at 5% Significance Level			
941					Lilliefors Test Statistic	0.531			**Lilliefors GOF Test**			
942					5% Lilliefors Critical Value	0.135			Data Not Normal at 5% Significance Level			
943						**Data Not Normal at 5% Significance Level**						
944												
945						**Assuming Normal Distribution**						
946					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
947					95% Student's-t UCL	453.8			95% Adjusted-CLT UCL (Chen-1995)		624.8	
948									95% Modified-t UCL (Johnson-1978)		481.4	
949												
950						**Gamma GOF Test**						
951					A-D Test Statistic	14.4			**Anderson-Darling Gamma GOF Test**			
952					5% A-D Critical Value	0.89			Data Not Gamma Distributed at 5% Significance Level			
953					K-S Test Statistic	0.502			**Kolmogorov-Smirnov Gamma GOF Test**			
954					5% K-S Critical Value	0.15			Data Not Gamma Distributed at 5% Significance Level			
955						**Data Not Gamma Distributed at 5% Significance Level**						
956												
957						**Gamma Statistics**						
958					k hat (MLE)	0.239			k star (bias corrected MLE)		0.238	
959					Theta hat (MLE)	729.1			Theta star (bias corrected MLE)		732.8	
960					nu hat (MLE)	20.09			nu star (bias corrected)		19.99	
961					MLE Mean (bias corrected)	174.4			MLE Sd (bias corrected)		357.5	
962									Approximate Chi Square Value (0.05)		10.85	
963					Adjusted Level of Significance	0.0443			Adjusted Chi Square Value		10.6	
964												
965						**Assuming Gamma Distribution**						
966					95% Approximate Gamma UCL (use when n>=50))	321.5			95% Adjusted Gamma UCL (use when n<50)		328.8	
967												

	A	B	C	D	E	F	G	H	I	J	K	L
968	**Lognormal GOF Test**											
969	Shapiro Wilk Test Statistic					0.425	**Shapiro Wilk Lognormal GOF Test**					
970	5% Shapiro Wilk Critical Value					0.942	Data Not Lognormal at 5% Significance Level					
971	Lilliefors Test Statistic					0.331	**Lilliefors Lognormal GOF Test**					
972	5% Lilliefors Critical Value					0.135	Data Not Lognormal at 5% Significance Level					
973	**Data Not Lognormal at 5% Significance Level**											
974												
975	**Lognormal Statistics**											
976	Minimum of Logged Data					1.668	Mean of logged Data					2.171
977	Maximum of Logged Data					8.851	SD of logged Data					1.151
978												
979	**Assuming Lognormal Distribution**											
980	95% H-UCL					26.8	90% Chebyshev (MVUE) UCL					27.29
981	95% Chebyshev (MVUE) UCL					32.13	97.5% Chebyshev (MVUE) UCL					38.86
982	99% Chebyshev (MVUE) UCL					52.07						
983												
984	**Nonparametric Distribution Free UCL Statistics**											
985	**Data do not follow a Discernible Distribution (0.05)**											
986												
987	**Nonparametric Distribution Free UCLs**											
988	95% CLT UCL					447.4	95% Jackknife UCL					453.8
989	95% Standard Bootstrap UCL					450.9	95% Bootstrap-t UCL					47019
990	95% Hall's Bootstrap UCL					22142	95% Percentile Bootstrap UCL					506
991	95% BCA Bootstrap UCL					672.7						
992	90% Chebyshev(Mean, Sd) UCL					672.4	95% Chebyshev(Mean, Sd) UCL					898
993	97.5% Chebyshev(Mean, Sd) UCL					1211	99% Chebyshev(Mean, Sd) UCL					1826
994												
995	**Suggested UCL to Use**											
996	95% Chebyshev (Mean, Sd) UCL					898						
997												
998	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
999	Recommendations are based upon data size, data distribution, and skewness.											
1000	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1001	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1002												
1003												

	A	B	C	D	E	F	G	H	I	J	K	L
1004	**TPH-ORO**											
1005												
1006						**General Statistics**						
1007					Total Number of Observations	34			Number of Distinct Observations		27	
1008									Number of Missing Observations		70	
1009					Minimum	5.3			Mean		102.9	
1010					Maximum	1058			Median		37	
1011					SD	201			Std. Error of Mean		34.48	
1012					Coefficient of Variation	1.954			Skewness		3.759	
1013												
1014						**Normal GOF Test**						
1015					Shapiro Wilk Test Statistic	0.518			**Shapiro Wilk GOF Test**			
1016					5% Shapiro Wilk Critical Value	0.933			Data Not Normal at 5% Significance Level			
1017					Lilliefors Test Statistic	0.314			**Lilliefors GOF Test**			
1018					5% Lilliefors Critical Value	0.15			Data Not Normal at 5% Significance Level			
1019						**Data Not Normal at 5% Significance Level**						
1020												
1021						**Assuming Normal Distribution**						
1022					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
1023					95% Student's-t UCL	161.2			95% Adjusted-CLT UCL (Chen-1995)		183.3	
1024									95% Modified-t UCL (Johnson-1978)		164.9	
1025												
1026						**Gamma GOF Test**						
1027					A-D Test Statistic	1.43			**Anderson-Darling Gamma GOF Test**			
1028					5% A-D Critical Value	0.805			Data Not Gamma Distributed at 5% Significance Level			
1029					K-S Test Statistic	0.163			**Kolmogorov-Smirnov Gamma GOF Test**			
1030					5% K-S Critical Value	0.159			Data Not Gamma Distributed at 5% Significance Level			
1031						**Data Not Gamma Distributed at 5% Significance Level**						
1032												
1033						**Gamma Statistics**						
1034					k hat (MLE)	0.567			k star (bias corrected MLE)		0.536	
1035					Theta hat (MLE)	181.6			Theta star (bias corrected MLE)		191.8	
1036					nu hat (MLE)	38.53			nu star (bias corrected)		36.46	
1037					MLE Mean (bias corrected)	102.9			MLE Sd (bias corrected)		140.5	
1038									Approximate Chi Square Value (0.05)		23.64	
1039					Adjusted Level of Significance	0.0422			Adjusted Chi Square Value		23.13	
1040												
1041						**Assuming Gamma Distribution**						
1042					95% Approximate Gamma UCL (use when n>=50))	158.6			95% Adjusted Gamma UCL (use when n<50)		162.2	
1043												

	A	B	C	D	E	F	G	H	I	J	K	L
1044	**Lognormal GOF Test**											
1045					Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk Lognormal GOF Test**					
1046					5% Shapiro Wilk Critical Value	0.933	Data Not Lognormal at 5% Significance Level					
1047					Lilliefors Test Statistic	0.161	**Lilliefors Lognormal GOF Test**					
1048					5% Lilliefors Critical Value	0.15	Data Not Lognormal at 5% Significance Level					
1049	**Data Not Lognormal at 5% Significance Level**											
1050												
1051	**Lognormal Statistics**											
1052					Minimum of Logged Data	1.668				Mean of logged Data		3.533
1053					Maximum of Logged Data	6.964				SD of logged Data		1.479
1054												
1055	**Assuming Lognormal Distribution**											
1056					95% H-UCL	226.5				90% Chebyshev (MVUE) UCL		189.4
1057					95% Chebyshev (MVUE) UCL	231.6				97.5% Chebyshev (MVUE) UCL		290.2
1058					99% Chebyshev (MVUE) UCL	405.4						
1059												
1060	**Nonparametric Distribution Free UCL Statistics**											
1061	**Data do not follow a Discernible Distribution (0.05)**											
1062												
1063	**Nonparametric Distribution Free UCLs**											
1064					95% CLT UCL	159.6				95% Jackknife UCL		161.2
1065					95% Standard Bootstrap UCL	159				95% Bootstrap-t UCL		237.4
1066					95% Hall's Bootstrap UCL	366.9				95% Percentile Bootstrap UCL		159.9
1067					95% BCA Bootstrap UCL	188.7						
1068					90% Chebyshev(Mean, Sd) UCL	206.3				95% Chebyshev(Mean, Sd) UCL		253.1
1069					97.5% Chebyshev(Mean, Sd) UCL	318.2				99% Chebyshev(Mean, Sd) UCL		445.9
1070												
1071	**Suggested UCL to Use**											
1072					95% Chebyshev (Mean, Sd) UCL	253.1						
1073												
1074	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1075	Recommendations are based upon data size, data distribution, and skewness.											
1076	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1077	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
1078												

UCL Statistics for Uncensored Full Data Sets

PARC Area 7

User Selected Options	
From File	WorkSheet_d.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Barium

General Statistics

Total Number of Observations	39	Number of Distinct Observations	31
		Number of Missing Observations	7
Minimum	18	Mean	91
Maximum	264	Median	96
SD	50.45	Std. Error of Mean	8.078
Coefficient of Variation	0.554	Skewness	0.958

Normal GOF Test

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.104	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	104.6	95% Adjusted-CLT UCL (Chen-1995)	105.6
		95% Modified-t UCL (Johnson-1978)	104.8

Gamma GOF Test

A-D Test Statistic	0.886	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.166	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.142	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.069	k star (bias corrected MLE)	2.85
Theta hat (MLE)	29.66	Theta star (bias corrected MLE)	31.93
nu hat (MLE)	239.4	nu star (bias corrected)	222.3
MLE Mean (bias corrected)	91	MLE Sd (bias corrected)	53.91
		Approximate Chi Square Value (0.05)	188.8
Adjusted Level of Significance	0.0437	Adjusted Chi Square Value	187.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	107.2	95% Adjusted Gamma UCL (use when n<50)	107.8

	A	B	C	D	E	F	G	H	I	J	K	L
51	**Lognormal GOF Test**											
52				Shapiro Wilk Test Statistic		0.93	**Shapiro Wilk Lognormal GOF Test**					
53				5% Shapiro Wilk Critical Value		0.939	Data Not Lognormal at 5% Significance Level					
54				Lilliefors Test Statistic		0.197	**Lilliefors Lognormal GOF Test**					
55				5% Lilliefors Critical Value		0.14	Data Not Lognormal at 5% Significance Level					
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59				Minimum of Logged Data		2.89			Mean of logged Data			4.339
60				Maximum of Logged Data		5.576			SD of logged Data			0.634
61												
62	**Assuming Lognormal Distribution**											
63				95% H-UCL		115.4			90% Chebyshev (MVUE) UCL			123.6
64				95% Chebyshev (MVUE) UCL		137.4			97.5% Chebyshev (MVUE) UCL			156.5
65				99% Chebyshev (MVUE) UCL		194.1						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71				95% CLT UCL		104.3			95% Jackknife UCL			104.6
72				95% Standard Bootstrap UCL		104.1			95% Bootstrap-t UCL			105.9
73				95% Hall's Bootstrap UCL		107.8			95% Percentile Bootstrap UCL			104.4
74				95% BCA Bootstrap UCL		105.4						
75				90% Chebyshev(Mean, Sd) UCL		115.2			95% Chebyshev(Mean, Sd) UCL			126.2
76				97.5% Chebyshev(Mean, Sd) UCL		141.4			99% Chebyshev(Mean, Sd) UCL			171.4
77												
78	**Suggested UCL to Use**											
79				95% Student's-t UCL		104.6						
80												
81	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
82	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
83												
84	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
85	Recommendations are based upon data size, data distribution, and skewness.											
86	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
88												
89												

90	**Copper**											
91												
92	**General Statistics**											
93				Total Number of Observations		39			Number of Distinct Observations		31	
94									Number of Missing Observations		7	
95				Minimum		1.1			Mean		159.3	
96				Maximum		4759			Median		12	
97				SD		764.9			Std. Error of Mean		122.5	
98				Coefficient of Variation		4.803			Skewness		6.037	
99												
100	**Normal GOF Test**											
101				Shapiro Wilk Test Statistic		0.213			**Shapiro Wilk GOF Test**			
102				5% Shapiro Wilk Critical Value		0.939			Data Not Normal at 5% Significance Level			
103				Lilliefors Test Statistic		0.485			**Lilliefors GOF Test**			
104				5% Lilliefors Critical Value		0.14			Data Not Normal at 5% Significance Level			
105	**Data Not Normal at 5% Significance Level**											
106												
107	**Assuming Normal Distribution**											
108				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
109				95% Student's-t UCL		365.8			95% Adjusted-CLT UCL (Chen-1995)		487.3	
110									95% Modified-t UCL (Johnson-1978)		385.5	
111												
112	**Gamma GOF Test**											
113				A-D Test Statistic		6.723			**Anderson-Darling Gamma GOF Test**			
114				5% A-D Critical Value		0.862			Data Not Gamma Distributed at 5% Significance Level			
115				K-S Test Statistic		0.363			**Kolmogorov-Smirnov Gamma GOF Test**			
116				5% K-S Critical Value		0.154			Data Not Gamma Distributed at 5% Significance Level			
117	**Data Not Gamma Distributed at 5% Significance Level**											
118												
119	**Gamma Statistics**											
120				k hat (MLE)		0.291			k star (bias corrected MLE)		0.286	
121				Theta hat (MLE)		547.7			Theta star (bias corrected MLE)		557.8	
122				nu hat (MLE)		22.68			nu star (bias corrected)		22.27	
123				MLE Mean (bias corrected)		159.3			MLE Sd (bias corrected)		298.1	
124									Approximate Chi Square Value (0.05)		12.54	
125				Adjusted Level of Significance		0.0437			Adjusted Chi Square Value		12.25	
126												
127	**Assuming Gamma Distribution**											
128				95% Approximate Gamma UCL (use when n>=50))		282.8			95% Adjusted Gamma UCL (use when n<50)		289.5	
129												

	A	B	C	D	E	F	G	H	I	J	K	L
130	**Lognormal GOF Test**											
131					Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk Lognormal GOF Test**					
132					5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level					
133					Lilliefors Test Statistic	0.131	**Lilliefors Lognormal GOF Test**					
134					5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level					
135	**Data appear Approximate Lognormal at 5% Significance Level**											
136												
137	**Lognormal Statistics**											
138					Minimum of Logged Data	0.0953	Mean of logged Data	2.687				
139					Maximum of Logged Data	8.468	SD of logged Data	1.592				
140												
141	**Assuming Lognormal Distribution**											
142					95% H-UCL	118.2	90% Chebyshev (MVUE) UCL	98.01				
143					95% Chebyshev (MVUE) UCL	120.3	97.5% Chebyshev (MVUE) UCL	151.3				
144					99% Chebyshev (MVUE) UCL	212.1						
145												
146	**Nonparametric Distribution Free UCL Statistics**											
147	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
148												
149	**Nonparametric Distribution Free UCLs**											
150					95% CLT UCL	360.7	95% Jackknife UCL	365.8				
151					95% Standard Bootstrap UCL	356.2	95% Bootstrap-t UCL	5884				
152					95% Hall's Bootstrap UCL	2518	95% Percentile Bootstrap UCL	398.9				
153					95% BCA Bootstrap UCL	528.8						
154					90% Chebyshev(Mean, Sd) UCL	526.7	95% Chebyshev(Mean, Sd) UCL	693.2				
155					97.5% Chebyshev(Mean, Sd) UCL	924.2	99% Chebyshev(Mean, Sd) UCL	1378				
156												
157	**Suggested UCL to Use**											
158					95% Chebyshev (Mean, Sd) UCL	693.2						
159												
160	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
161	Recommendations are based upon data size, data distribution, and skewness.											
162	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
163	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
164												
165												

	A	B	C	D	E	F	G	H	I	J	K	L
166	**Lead**											
167												
168						**General Statistics**							
169						Total Number of Observations	39				Number of Distinct Observations	30
170											Number of Missing Observations	7
171						Minimum	1				Mean	25.98
172						Maximum	254				Median	6.8
173						SD	45.47				Std. Error of Mean	7.28
174						Coefficient of Variation	1.75				Skewness	3.658
175												
176						**Normal GOF Test**						
177						Shapiro Wilk Test Statistic	0.585			**Shapiro Wilk GOF Test**		
178						5% Shapiro Wilk Critical Value	0.939			Data Not Normal at 5% Significance Level		
179						Lilliefors Test Statistic	0.291			**Lilliefors GOF Test**		
180						5% Lilliefors Critical Value	0.14			Data Not Normal at 5% Significance Level		
181						**Data Not Normal at 5% Significance Level**						
182												
183						**Assuming Normal Distribution**						
184						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
185						95% Student's-t UCL	38.26			95% Adjusted-CLT UCL (Chen-1995)	42.52	
186										95% Modified-t UCL (Johnson-1978)	38.97	
187												
188						**Gamma GOF Test**						
189						A-D Test Statistic	1.409			**Anderson-Darling Gamma GOF Test**		
190						5% A-D Critical Value	0.81			Data Not Gamma Distributed at 5% Significance Level		
191						K-S Test Statistic	0.175			**Kolmogorov-Smirnov Gamma GOF Test**		
192						5% K-S Critical Value	0.149			Data Not Gamma Distributed at 5% Significance Level		
193						**Data Not Gamma Distributed at 5% Significance Level**						
194												
195						**Gamma Statistics**						
196						k hat (MLE)	0.53			k star (bias corrected MLE)	0.506	
197						Theta hat (MLE)	49.06			Theta star (bias corrected MLE)	51.35	
198						nu hat (MLE)	41.31			nu star (bias corrected)	39.47	
199						MLE Mean (bias corrected)	25.98			MLE Sd (bias corrected)	36.53	
200										Approximate Chi Square Value (0.05)	26.08	
201						Adjusted Level of Significance	0.0437			Adjusted Chi Square Value	25.65	
202												
203						**Assuming Gamma Distribution**						
204						95% Approximate Gamma UCL (use when n>=50))	39.33			95% Adjusted Gamma UCL (use when n<50)	39.99	
205												

	A	B	C	D	E	F	G	H	I	J	K	L
206	**Lognormal GOF Test**											
207				Shapiro Wilk Test Statistic		0.909	**Shapiro Wilk Lognormal GOF Test**					
208				5% Shapiro Wilk Critical Value		0.939	Data Not Lognormal at 5% Significance Level					
209				Lilliefors Test Statistic		0.128	**Lilliefors Lognormal GOF Test**					
210				5% Lilliefors Critical Value		0.14	Data appear Lognormal at 5% Significance Level					
211	**Data appear Approximate Lognormal at 5% Significance Level**											
212												
213	**Lognormal Statistics**											
214				Minimum of Logged Data		0			Mean of logged Data			2.069
215				Maximum of Logged Data		5.537			SD of logged Data			1.645
216												
217	**Assuming Lognormal Distribution**											
218				95% H-UCL		72.74			90% Chebyshev (MVUE) UCL			58.36
219				95% Chebyshev (MVUE) UCL		71.93			97.5% Chebyshev (MVUE) UCL			90.75
220				99% Chebyshev (MVUE) UCL		127.7						
221												
222	**Nonparametric Distribution Free UCL Statistics**											
223	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
224												
225	**Nonparametric Distribution Free UCLs**											
226				95% CLT UCL		37.96			95% Jackknife UCL			38.26
227				95% Standard Bootstrap UCL		38.01			95% Bootstrap-t UCL			48.33
228				95% Hall's Bootstrap UCL		89.1			95% Percentile Bootstrap UCL			38.65
229				95% BCA Bootstrap UCL		42.85						
230				90% Chebyshev(Mean, Sd) UCL		47.83			95% Chebyshev(Mean, Sd) UCL			57.72
231				97.5% Chebyshev(Mean, Sd) UCL		71.45			99% Chebyshev(Mean, Sd) UCL			98.42
232												
233	**Suggested UCL to Use**											
234				95% Chebyshev (Mean, Sd) UCL		57.72						
235												
236	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
237	Recommendations are based upon data size, data distribution, and skewness.											
238	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
239	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
240												
241												

242	**Mercury**											
243												
244						**General Statistics**							
245					Total Number of Observations	39			Number of Distinct Observations	14		
246									Number of Missing Observations	7		
247					Minimum	0.04			Mean	0.172		
248					Maximum	1.29			Median	0.11		
249					SD	0.208			Std. Error of Mean	0.0334		
250					Coefficient of Variation	1.211			Skewness	4.663		
251												
252						**Normal GOF Test**						
253					Shapiro Wilk Test Statistic	0.387			**Shapiro Wilk GOF Test**			
254					5% Shapiro Wilk Critical Value	0.939			Data Not Normal at 5% Significance Level			
255					Lilliefors Test Statistic	0.344			**Lilliefors GOF Test**			
256					5% Lilliefors Critical Value	0.14			Data Not Normal at 5% Significance Level			
257						**Data Not Normal at 5% Significance Level**						
258												
259						**Assuming Normal Distribution**						
260					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
261					95% Student's-t UCL	0.228			95% Adjusted-CLT UCL (Chen-1995)	0.254		
262									95% Modified-t UCL (Johnson-1978)	0.232		
263												
264						**Gamma GOF Test**						
265					A-D Test Statistic	6.664			**Anderson-Darling Gamma GOF Test**			
266					5% A-D Critical Value	0.758			Data Not Gamma Distributed at 5% Significance Level			
267					K-S Test Statistic	0.301			**Kolmogorov-Smirnov Gamma GOF Test**			
268					5% K-S Critical Value	0.143			Data Not Gamma Distributed at 5% Significance Level			
269						**Data Not Gamma Distributed at 5% Significance Level**						
270												
271						**Gamma Statistics**						
272					k hat (MLE)	2.228			k star (bias corrected MLE)	2.073		
273					Theta hat (MLE)	0.0772			Theta star (bias corrected MLE)	0.083		
274					nu hat (MLE)	173.8			nu star (bias corrected)	161.7		
275					MLE Mean (bias corrected)	0.172			MLE Sd (bias corrected)	0.119		
276									Approximate Chi Square Value (0.05)	133.3		
277					Adjusted Level of Significance	0.0437			Adjusted Chi Square Value	132.3		
278												
279						**Assuming Gamma Distribution**							
280					95% Approximate Gamma UCL (use when n>=50))	0.209			95% Adjusted Gamma UCL (use when n<50)	0.21		
281												

282	**Lognormal GOF Test**											
283					Shapiro Wilk Test Statistic	0.681	**Shapiro Wilk Lognormal GOF Test**					
284					5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level					
285					Lilliefors Test Statistic	0.304	**Lilliefors Lognormal GOF Test**					
286					5% Lilliefors Critical Value	0.14	Data Not Lognormal at 5% Significance Level					
287	**Data Not Lognormal at 5% Significance Level**											
288												
289	**Lognormal Statistics**											
290					Minimum of Logged Data	-3.219	Mean of logged Data	-2.001				
291					Maximum of Logged Data	0.255	SD of logged Data	0.558				
292												
293	**Assuming Lognormal Distribution**											
294					95% H-UCL	0.189	90% Chebyshev (MVUE) UCL	0.202				
295					95% Chebyshev (MVUE) UCL	0.222	97.5% Chebyshev (MVUE) UCL	0.25				
296					99% Chebyshev (MVUE) UCL	0.305						
297												
298	**Nonparametric Distribution Free UCL Statistics**											
299	**Data do not follow a Discernible Distribution (0.05)**											
300												
301	**Nonparametric Distribution Free UCLs**											
302					95% CLT UCL	0.227	95% Jackknife UCL	0.228				
303					95% Standard Bootstrap UCL	0.226	95% Bootstrap-t UCL	0.401				
304					95% Hall's Bootstrap UCL	0.464	95% Percentile Bootstrap UCL	0.235				
305					95% BCA Bootstrap UCL	0.278						
306					90% Chebyshev(Mean, Sd) UCL	0.272	95% Chebyshev(Mean, Sd) UCL	0.317				
307					97.5% Chebyshev(Mean, Sd) UCL	0.38	99% Chebyshev(Mean, Sd) UCL	0.504				
308												
309	**Suggested UCL to Use**											
310					95% Chebyshev (Mean, Sd) UCL	0.317						
311												
312	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
313	Recommendations are based upon data size, data distribution, and skewness.											
314	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
315	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
316												
317												

318	**Zinc**										
319											
320	**General Statistics**										
321				Total Number of Observations	39			Number of Distinct Observations	33		
322								Number of Missing Observations	7		
323				Minimum	12			Mean	92.87		
324				Maximum	941			Median	47		
325				SD	155.3			Std. Error of Mean	24.88		
326				Coefficient of Variation	1.673			Skewness	4.602		
327											
328	**Normal GOF Test**										
329				Shapiro Wilk Test Statistic	0.486		**Shapiro Wilk GOF Test**				
330				5% Shapiro Wilk Critical Value	0.939		Data Not Normal at 5% Significance Level				
331				Lilliefors Test Statistic	0.301		**Lilliefors GOF Test**				
332				5% Lilliefors Critical Value	0.14		Data Not Normal at 5% Significance Level				
333	**Data Not Normal at 5% Significance Level**										
334											
335	**Assuming Normal Distribution**										
336	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**				
337				95% Student's-t UCL	134.8			95% Adjusted-CLT UCL (Chen-1995)	153.4		
338								95% Modified-t UCL (Johnson-1978)	137.9		
339											
340	**Gamma GOF Test**										
341				A-D Test Statistic	1.597		**Anderson-Darling Gamma GOF Test**				
342				5% A-D Critical Value	0.778		Data Not Gamma Distributed at 5% Significance Level				
343				K-S Test Statistic	0.174		**Kolmogorov-Smirnov Gamma GOF Test**				
344				5% K-S Critical Value	0.146		Data Not Gamma Distributed at 5% Significance Level				
345	**Data Not Gamma Distributed at 5% Significance Level**										
346											
347	**Gamma Statistics**										
348				k hat (MLE)	0.999			k star (bias corrected MLE)	0.939		
349				Theta hat (MLE)	92.98			Theta star (bias corrected MLE)	98.9		
350				nu hat (MLE)	77.91			nu star (bias corrected)	73.25		
351				MLE Mean (bias corrected)	92.87			MLE Sd (bias corrected)	95.84		
352								Approximate Chi Square Value (0.05)	54.54		
353				Adjusted Level of Significance	0.0437			Adjusted Chi Square Value	53.9		
354											
355	**Assuming Gamma Distribution**										
356				95% Approximate Gamma UCL (use when n>=50))	124.7			95% Adjusted Gamma UCL (use when n<50)	126.2		
357											

358	**Lognormal GOF Test**											
359				Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**						
360				5% Shapiro Wilk Critical Value	0.939	Data appear Lognormal at 5% Significance Level						
361				Lilliefors Test Statistic	0.0902	**Lilliefors Lognormal GOF Test**						
362				5% Lilliefors Critical Value	0.14	Data appear Lognormal at 5% Significance Level						
363	**Data appear Lognormal at 5% Significance Level**											
364												
365	**Lognormal Statistics**											
366				Minimum of Logged Data	2.485	Mean of logged Data	3.953					
367				Maximum of Logged Data	6.847	SD of logged Data	0.985					
368												
369	**Assuming Lognormal Distribution**											
370				95% H-UCL	123.8	90% Chebyshev (MVUE) UCL	128.7					
371				95% Chebyshev (MVUE) UCL	149.4	97.5% Chebyshev (MVUE) UCL	178					
372				99% Chebyshev (MVUE) UCL	234.3							
373												
374	**Nonparametric Distribution Free UCL Statistics**											
375	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
376												
377	**Nonparametric Distribution Free UCLs**											
378				95% CLT UCL	133.8	95% Jackknife UCL	134.8					
379				95% Standard Bootstrap UCL	133.4	95% Bootstrap-t UCL	188.2					
380				95% Hall's Bootstrap UCL	284.6	95% Percentile Bootstrap UCL	139.3					
381				95% BCA Bootstrap UCL	158.9							
382				90% Chebyshev(Mean, Sd) UCL	167.5	95% Chebyshev(Mean, Sd) UCL	201.3					
383				97.5% Chebyshev(Mean, Sd) UCL	248.2	99% Chebyshev(Mean, Sd) UCL	340.4					
384												
385	**Suggested UCL to Use**											
386				95% H-UCL	123.8							
387												
388	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
389	Recommendations are based upon data size, data distribution, and skewness.											
390	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
391	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
392												
393	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
394	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
395	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
396	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
397												
398												

	A	B	C	D	E	F	G	H	I	J	K	L
399	**TPH-GRO**											
400												
401	**General Statistics**											
402	Total Number of Observations					20	Number of Distinct Observations					2
403							Number of Missing Observations					26
404	Minimum					1.1	Mean					1.31
405	Maximum					5.3	Median					1.1
406	SD					0.939	Std. Error of Mean					0.21
407	Coefficient of Variation					0.717	Skewness					4.472
408												
409	**Normal GOF Test**											
410	Shapiro Wilk Test Statistic					0.236	**Shapiro Wilk GOF Test**					
411	5% Shapiro Wilk Critical Value					0.905	Data Not Normal at 5% Significance Level					
412	Lilliefors Test Statistic					0.538	**Lilliefors GOF Test**					
413	5% Lilliefors Critical Value					0.192	Data Not Normal at 5% Significance Level					
414	**Data Not Normal at 5% Significance Level**											
415												
416	**Assuming Normal Distribution**											
417	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
418	95% Student's-t UCL					1.673	95% Adjusted-CLT UCL (Chen-1995)					1.88
419							95% Modified-t UCL (Johnson-1978)					1.708
420												
421	**Gamma GOF Test**											
422	A-D Test Statistic					7.29	**Anderson-Darling Gamma GOF Test**					
423	5% A-D Critical Value					0.745	Data Not Gamma Distributed at 5% Significance Level					
424	K-S Test Statistic					0.547	**Kolmogorov-Smirnov Gamma GOF Test**					
425	5% K-S Critical Value					0.194	Data Not Gamma Distributed at 5% Significance Level					
426	**Data Not Gamma Distributed at 5% Significance Level**											
427												
428	**Gamma Statistics**											
429	k hat (MLE)					5.364	k star (bias corrected MLE)					4.593
430	Theta hat (MLE)					0.244	Theta star (bias corrected MLE)					0.285
431	nu hat (MLE)					214.6	nu star (bias corrected)					183.7
432	MLE Mean (bias corrected)					1.31	MLE Sd (bias corrected)					0.611
433							Approximate Chi Square Value (0.05)					153.4
434	Adjusted Level of Significance					0.038	Adjusted Chi Square Value					151.2
435												
436	**Assuming Gamma Distribution**											
437	95% Approximate Gamma UCL (use when n>=50))					1.569	95% Adjusted Gamma UCL (use when n<50)					1.592
438												

	A	B	C	D	E	F	G	H	I	J	K	L
439	**Lognormal GOF Test**											
440					Shapiro Wilk Test Statistic	0.236	**Shapiro Wilk Lognormal GOF Test**					
441					5% Shapiro Wilk Critical Value	0.905	Data Not Lognormal at 5% Significance Level					
442					Lilliefors Test Statistic	0.538	**Lilliefors Lognormal GOF Test**					
443					5% Lilliefors Critical Value	0.192	Data Not Lognormal at 5% Significance Level					
444	**Data Not Lognormal at 5% Significance Level**											
445												
446	**Lognormal Statistics**											
447					Minimum of Logged Data	0.0953	Mean of logged Data	0.174				
448					Maximum of Logged Data	1.668	SD of logged Data	0.352				
449												
450	**Assuming Lognormal Distribution**											
451					95% H-UCL	1.474	90% Chebyshev (MVUE) UCL	1.565				
452					95% Chebyshev (MVUE) UCL	1.702	97.5% Chebyshev (MVUE) UCL	1.893				
453					99% Chebyshev (MVUE) UCL	2.267						
454												
455	**Nonparametric Distribution Free UCL Statistics**											
456	**Data do not follow a Discernible Distribution (0.05)**											
457												
458	**Nonparametric Distribution Free UCLs**											
459					95% CLT UCL	1.655	95% Jackknife UCL	N/A				
460					95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A				
461					95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A				
462					95% BCA Bootstrap UCL	N/A						
463					90% Chebyshev(Mean, Sd) UCL	1.94	95% Chebyshev(Mean, Sd) UCL	2.225				
464					97.5% Chebyshev(Mean, Sd) UCL	2.621	99% Chebyshev(Mean, Sd) UCL	3.399				
465												
466	**Suggested UCL to Use**											
467					95% Student's-t UCL	1.673	or 95% Modified-t UCL	1.708				
468												
469	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
470	Recommendations are based upon data size, data distribution, and skewness.											
471	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
472	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
473												
474												

	A	B	C	D	E	F	G	H	I	J	K	L
475	**TPH-DRO**											
476												
477	**General Statistics**											
478	Total Number of Observations					20	Number of Distinct Observations					10
479							Number of Missing Observations					26
480	Minimum					5.3	Mean					387.9
481	Maximum					6663	Median					11
482	SD					1481	Std. Error of Mean					331.3
483	Coefficient of Variation					3.819	Skewness					4.429
484												
485	**Normal GOF Test**											
486	Shapiro Wilk Test Statistic					0.277	**Shapiro Wilk GOF Test**					
487	5% Shapiro Wilk Critical Value					0.905	Data Not Normal at 5% Significance Level					
488	Lilliefors Test Statistic					0.447	**Lilliefors GOF Test**					
489	5% Lilliefors Critical Value					0.192	Data Not Normal at 5% Significance Level					
490	**Data Not Normal at 5% Significance Level**											
491												
492	**Assuming Normal Distribution**											
493	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
494	95% Student's-t UCL					960.7	95% Adjusted-CLT UCL (Chen-1995)					1283
495							95% Modified-t UCL (Johnson-1978)					1015
496												
497	**Gamma GOF Test**											
498	A-D Test Statistic					4.262	**Anderson-Darling Gamma GOF Test**					
499	5% A-D Critical Value					0.86	Data Not Gamma Distributed at 5% Significance Level					
500	K-S Test Statistic					0.37	**Kolmogorov-Smirnov Gamma GOF Test**					
501	5% K-S Critical Value					0.212	Data Not Gamma Distributed at 5% Significance Level					
502	**Data Not Gamma Distributed at 5% Significance Level**											
503												
504	**Gamma Statistics**											
505	k hat (MLE)					0.268	k star (bias corrected MLE)					0.261
506	Theta hat (MLE)					1449	Theta star (bias corrected MLE)					1487
507	nu hat (MLE)					10.71	nu star (bias corrected)					10.43
508	MLE Mean (bias corrected)					387.9	MLE Sd (bias corrected)					759.5
509							Approximate Chi Square Value (0.05)					4.215
510	Adjusted Level of Significance					0.038	Adjusted Chi Square Value					3.907
511												
512	**Assuming Gamma Distribution**											
513	95% Approximate Gamma UCL (use when n>=50))					960.3	95% Adjusted Gamma UCL (use when n<50)					1036
514												

	A	B	C	D	E	F	G	H	I	J	K	L
515	**Lognormal GOF Test**											
516					Shapiro Wilk Test Statistic	0.706	**Shapiro Wilk Lognormal GOF Test**					
517					5% Shapiro Wilk Critical Value	0.905	Data Not Lognormal at 5% Significance Level					
518					Lilliefors Test Statistic	0.305	**Lilliefors Lognormal GOF Test**					
519					5% Lilliefors Critical Value	0.192	Data Not Lognormal at 5% Significance Level					
520	**Data Not Lognormal at 5% Significance Level**											
521												
522	**Lognormal Statistics**											
523					Minimum of Logged Data	1.668			Mean of logged Data	3.337		
524					Maximum of Logged Data	8.804			SD of logged Data	1.746		
525												
526	**Assuming Lognormal Distribution**											
527					95% H-UCL	604.7			90% Chebyshev (MVUE) UCL	266.9		
528					95% Chebyshev (MVUE) UCL	338			97.5% Chebyshev (MVUE) UCL	436.7		
529					99% Chebyshev (MVUE) UCL	630.6						
530												
531	**Nonparametric Distribution Free UCL Statistics**											
532	**Data do not follow a Discernible Distribution (0.05)**											
533												
534	**Nonparametric Distribution Free UCLs**											
535					95% CLT UCL	932.8			95% Jackknife UCL	960.7		
536					95% Standard Bootstrap UCL	911.3			95% Bootstrap-t UCL	10935		
537					95% Hall's Bootstrap UCL	8897			95% Percentile Bootstrap UCL	1044		
538					95% BCA Bootstrap UCL	1397						
539					90% Chebyshev(Mean, Sd) UCL	1382			95% Chebyshev(Mean, Sd) UCL	1832		
540					97.5% Chebyshev(Mean, Sd) UCL	2457			99% Chebyshev(Mean, Sd) UCL	3684		
541												
542	**Suggested UCL to Use**											
543					95% Chebyshev (Mean, Sd) UCL	1832						
544												
545	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
546	Recommendations are based upon data size, data distribution, and skewness.											
547	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
548	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
549												
550												

	A	B	C	D	E	F	G	H	I	J	K	L
551	**4,4'-DDD**											
552												
553						**General Statistics**						
554					Total Number of Observations	10			Number of Distinct Observations		2	
555									Number of Missing Observations		36	
556					Minimum	1.1			Mean		1.35	
557					Maximum	3.6			Median		1.1	
558					SD	0.791			Std. Error of Mean		0.25	
559					Coefficient of Variation	0.586			Skewness		3.162	
560												
561						**Normal GOF Test**						
562					Shapiro Wilk Test Statistic	0.366			**Shapiro Wilk GOF Test**			
563					5% Shapiro Wilk Critical Value	0.842			Data Not Normal at 5% Significance Level			
564					Lilliefors Test Statistic	0.524			**Lilliefors GOF Test**			
565					5% Lilliefors Critical Value	0.262			Data Not Normal at 5% Significance Level			
566						**Data Not Normal at 5% Significance Level**						
567												
568						**Assuming Normal Distribution**						
569					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
570					95% Student's-t UCL	1.808			95% Adjusted-CLT UCL (Chen-1995)		2.028	
571									95% Modified-t UCL (Johnson-1978)		1.85	
572												
573						**Gamma GOF Test**						
574					A-D Test Statistic	3.315			**Anderson-Darling Gamma GOF Test**			
575					5% A-D Critical Value	0.729			Data Not Gamma Distributed at 5% Significance Level			
576					K-S Test Statistic	0.535			**Kolmogorov-Smirnov Gamma GOF Test**			
577					5% K-S Critical Value	0.267			Data Not Gamma Distributed at 5% Significance Level			
578						**Data Not Gamma Distributed at 5% Significance Level**						
579												
580						**Gamma Statistics**						
581					k hat (MLE)	5.96			k star (bias corrected MLE)		4.239	
582					Theta hat (MLE)	0.227			Theta star (bias corrected MLE)		0.318	
583					nu hat (MLE)	119.2			nu star (bias corrected)		84.77	
584					MLE Mean (bias corrected)	1.35			MLE Sd (bias corrected)		0.656	
585									Approximate Chi Square Value (0.05)		64.55	
586					Adjusted Level of Significance	0.0267			Adjusted Chi Square Value		61.49	
587												
588						**Assuming Gamma Distribution**						
589					95% Approximate Gamma UCL (use when n>=50))	1.773			95% Adjusted Gamma UCL (use when n<50)		1.861	
590												

	A	B	C	D	E	F	G	H	I	J	K	L
591	**Lognormal GOF Test**											
592					Shapiro Wilk Test Statistic	0.366	**Shapiro Wilk Lognormal GOF Test**					
593					5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level					
594					Lilliefors Test Statistic	0.524	**Lilliefors Lognormal GOF Test**					
595					5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level					
596	**Data Not Lognormal at 5% Significance Level**											
597												
598	**Lognormal Statistics**											
599					Minimum of Logged Data	0.0953			Mean of logged Data	0.214		
600					Maximum of Logged Data	1.281			SD of logged Data	0.375		
601												
602	**Assuming Lognormal Distribution**											
603					95% H-UCL	1.719			90% Chebyshev (MVUE) UCL	1.793		
604					95% Chebyshev (MVUE) UCL	2.008			97.5% Chebyshev (MVUE) UCL	2.306		
605					99% Chebyshev (MVUE) UCL	2.891						
606												
607	**Nonparametric Distribution Free UCL Statistics**											
608	**Data do not follow a Discernible Distribution (0.05)**											
609												
610	**Nonparametric Distribution Free UCLs**											
611					95% CLT UCL	1.761			95% Jackknife UCL	N/A		
612					95% Standard Bootstrap UCL	N/A			95% Bootstrap-t UCL	N/A		
613					95% Hall's Bootstrap UCL	N/A			95% Percentile Bootstrap UCL	N/A		
614					95% BCA Bootstrap UCL	N/A						
615					90% Chebyshev(Mean, Sd) UCL	2.1			95% Chebyshev(Mean, Sd) UCL	2.44		
616					97.5% Chebyshev(Mean, Sd) UCL	2.911			99% Chebyshev(Mean, Sd) UCL	3.837		
617												
618	**Suggested UCL to Use**											
619					95% Student's-t UCL	1.808			or 95% Modified-t UCL	1.85		
620												
621	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
622	Recommendations are based upon data size, data distribution, and skewness.											
623	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
624	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
625												
626												

	A	B	C	D	E	F	G	H	I	J	K	L
627	**4,4'-DDE**											
628												
629	**General Statistics**											
630	Total Number of Observations					10	Number of Distinct Observations					2
631							Number of Missing Observations					36
632	Minimum					1.1	Mean					1.61
633	Maximum					6.2	Median					1.1
634	SD					1.613	Std. Error of Mean					0.51
635	Coefficient of Variation					1.002	Skewness					3.162
636												
637	**Normal GOF Test**											
638	Shapiro Wilk Test Statistic					0.366	**Shapiro Wilk GOF Test**					
639	5% Shapiro Wilk Critical Value					0.842	Data Not Normal at 5% Significance Level					
640	Lilliefors Test Statistic					0.524	**Lilliefors GOF Test**					
641	5% Lilliefors Critical Value					0.262	Data Not Normal at 5% Significance Level					
642	**Data Not Normal at 5% Significance Level**											
643												
644	**Assuming Normal Distribution**											
645	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
646	95% Student's-t UCL					2.545	95% Adjusted-CLT UCL (Chen-1995)					2.994
647							95% Modified-t UCL (Johnson-1978)					2.63
648												
649	**Gamma GOF Test**											
650	A-D Test Statistic					3.339	**Anderson-Darling Gamma GOF Test**					
651	5% A-D Critical Value					0.734	Data Not Gamma Distributed at 5% Significance Level					
652	K-S Test Statistic					0.54	**Kolmogorov-Smirnov Gamma GOF Test**					
653	5% K-S Critical Value					0.269	Data Not Gamma Distributed at 5% Significance Level					
654	**Data Not Gamma Distributed at 5% Significance Level**											
655												
656	**Gamma Statistics**											
657	k hat (MLE)					2.558	k star (bias corrected MLE)					1.857
658	Theta hat (MLE)					0.629	Theta star (bias corrected MLE)					0.867
659	nu hat (MLE)					51.16	nu star (bias corrected)					37.15
660	MLE Mean (bias corrected)					1.61	MLE Sd (bias corrected)					1.181
661							Approximate Chi Square Value (0.05)					24.19
662	Adjusted Level of Significance					0.0267	Adjusted Chi Square Value					22.39
663												
664	**Assuming Gamma Distribution**											
665	95% Approximate Gamma UCL (use when n>=50))					2.472	95% Adjusted Gamma UCL (use when n<50)					2.671
666												

	A	B	C	D	E	F	G	H	I	J	K	L
667	**Lognormal GOF Test**											
668					Shapiro Wilk Test Statistic	0.366	**Shapiro Wilk Lognormal GOF Test**					
669					5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level					
670					Lilliefors Test Statistic	0.524	**Lilliefors Lognormal GOF Test**					
671					5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level					
672	**Data Not Lognormal at 5% Significance Level**											
673												
674	**Lognormal Statistics**											
675					Minimum of Logged Data	0.0953	Mean of logged Data	0.268				
676					Maximum of Logged Data	1.825	SD of logged Data	0.547				
677												
678	**Assuming Lognormal Distribution**											
679					95% H-UCL	2.304	90% Chebyshev (MVUE) UCL	2.285				
680					95% Chebyshev (MVUE) UCL	2.643	97.5% Chebyshev (MVUE) UCL	3.14				
681					99% Chebyshev (MVUE) UCL	4.117						
682												
683	**Nonparametric Distribution Free UCL Statistics**											
684	**Data do not follow a Discernible Distribution (0.05)**											
685												
686	**Nonparametric Distribution Free UCLs**											
687					95% CLT UCL	2.449	95% Jackknife UCL	N/A				
688					95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A				
689					95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A				
690					95% BCA Bootstrap UCL	N/A						
691					90% Chebyshev(Mean, Sd) UCL	3.14	95% Chebyshev(Mean, Sd) UCL	3.833				
692					97.5% Chebyshev(Mean, Sd) UCL	4.795	99% Chebyshev(Mean, Sd) UCL	6.684				
693												
694	**Suggested UCL to Use**											
695					95% Chebyshev (Mean, Sd) UCL	3.833						
696												
697	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
698	Recommendations are based upon data size, data distribution, and skewness.											
699	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
700	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
701												
702												

	A	B	C	D	E	F	G	H	I	J	K	L
703	**4,4'-DDT**											
704												
705						**General Statistics**						
706					Total Number of Observations	10			Number of Distinct Observations		4	
707									Number of Missing Observations		36	
708					Minimum	1.1			Mean		1.95	
709					Maximum	6.5			Median		1.1	
710					SD	1.737			Std. Error of Mean		0.549	
711					Coefficient of Variation	0.891			Skewness		2.424	
712												
713						**Normal GOF Test**						
714					Shapiro Wilk Test Statistic	0.587			**Shapiro Wilk GOF Test**			
715					5% Shapiro Wilk Critical Value	0.842			Data Not Normal at 5% Significance Level			
716					Lilliefors Test Statistic	0.388			**Lilliefors GOF Test**			
717					5% Lilliefors Critical Value	0.262			Data Not Normal at 5% Significance Level			
718						**Data Not Normal at 5% Significance Level**						
719												
720						**Assuming Normal Distribution**						
721					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
722					95% Student's-t UCL	2.957			95% Adjusted-CLT UCL (Chen-1995)		3.303	
723									95% Modified-t UCL (Johnson-1978)		3.027	
724												
725						**Gamma GOF Test**						
726					A-D Test Statistic	1.769			**Anderson-Darling Gamma GOF Test**			
727					5% A-D Critical Value	0.734			Data Not Gamma Distributed at 5% Significance Level			
728					K-S Test Statistic	0.421			**Kolmogorov-Smirnov Gamma GOF Test**			
729					5% K-S Critical Value	0.269			Data Not Gamma Distributed at 5% Significance Level			
730						**Data Not Gamma Distributed at 5% Significance Level**						
731												
732						**Gamma Statistics**						
733					k hat (MLE)	2.406			k star (bias corrected MLE)		1.751	
734					Theta hat (MLE)	0.81			Theta star (bias corrected MLE)		1.114	
735					nu hat (MLE)	48.13			nu star (bias corrected)		35.02	
736					MLE Mean (bias corrected)	1.95			MLE Sd (bias corrected)		1.474	
737									Approximate Chi Square Value (0.05)		22.48	
738					Adjusted Level of Significance	0.0267			Adjusted Chi Square Value		20.75	
739												
740						**Assuming Gamma Distribution**						
741					95% Approximate Gamma UCL (use when n>=50))	3.038			95% Adjusted Gamma UCL (use when n<50)		3.291	
742												

	A	B	C	D	E	F	G	H	I	J	K	L
743	**Lognormal GOF Test**											
744					Shapiro Wilk Test Statistic	0.654	**Shapiro Wilk Lognormal GOF Test**					
745					5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level					
746					Lilliefors Test Statistic	0.414	**Lilliefors Lognormal GOF Test**					
747					5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level					
748	**Data Not Lognormal at 5% Significance Level**											
749												
750	**Lognormal Statistics**											
751					Minimum of Logged Data	0.0953	Mean of logged Data	0.446				
752					Maximum of Logged Data	1.872	SD of logged Data	0.622				
753												
754	**Assuming Lognormal Distribution**											
755					95% H-UCL	3.118	90% Chebyshev (MVUE) UCL	2.976				
756					95% Chebyshev (MVUE) UCL	3.484	97.5% Chebyshev (MVUE) UCL	4.189				
757					99% Chebyshev (MVUE) UCL	5.575						
758												
759	**Nonparametric Distribution Free UCL Statistics**											
760	**Data do not follow a Discernible Distribution (0.05)**											
761												
762	**Nonparametric Distribution Free UCLs**											
763					95% CLT UCL	2.853	95% Jackknife UCL	2.957				
764					95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A				
765					95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A				
766					95% BCA Bootstrap UCL	N/A						
767					90% Chebyshev(Mean, Sd) UCL	3.598	95% Chebyshev(Mean, Sd) UCL	4.344				
768					97.5% Chebyshev(Mean, Sd) UCL	5.38	99% Chebyshev(Mean, Sd) UCL	7.414				
769												
770	**Suggested UCL to Use**											
771					95% Chebyshev (Mean, Sd) UCL	4.344						
772												
773	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
774	Recommendations are based upon data size, data distribution, and skewness.											
775	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
776	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
777												
778												

779	**alpha-BHC**											
780												
781	**General Statistics**											
782				Total Number of Observations	10			Number of Distinct Observations	2			
783								Number of Missing Observations	36			
784				Minimum	1.1			Mean	1.25			
785				Maximum	2.6			Median	1.1			
786				SD	0.474			Std. Error of Mean	0.15			
787				Coefficient of Variation	0.379			Skewness	3.162			
788												
789	**Normal GOF Test**											
790				Shapiro Wilk Test Statistic	0.366			**Shapiro Wilk GOF Test**				
791				5% Shapiro Wilk Critical Value	0.842			Data Not Normal at 5% Significance Level				
792				Lilliefors Test Statistic	0.524			**Lilliefors GOF Test**				
793				5% Lilliefors Critical Value	0.262			Data Not Normal at 5% Significance Level				
794	**Data Not Normal at 5% Significance Level**											
795												
796	**Assuming Normal Distribution**											
797				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**				
798				95% Student's-t UCL	1.525			95% Adjusted-CLT UCL (Chen-1995)	1.657			
799								95% Modified-t UCL (Johnson-1978)	1.55			
800												
801	**Gamma GOF Test**											
802				A-D Test Statistic	3.305			**Anderson-Darling Gamma GOF Test**				
803				5% A-D Critical Value	0.725			Data Not Gamma Distributed at 5% Significance Level				
804				K-S Test Statistic	0.533			**Kolmogorov-Smirnov Gamma GOF Test**				
805				5% K-S Critical Value	0.267			Data Not Gamma Distributed at 5% Significance Level				
806	**Data Not Gamma Distributed at 5% Significance Level**											
807												
808	**Gamma Statistics**											
809				k hat (MLE)	12.12			k star (bias corrected MLE)	8.552			
810				Theta hat (MLE)	0.103			Theta star (bias corrected MLE)	0.146			
811				nu hat (MLE)	242.4			nu star (bias corrected)	171			
812				MLE Mean (bias corrected)	1.25			MLE Sd (bias corrected)	0.427			
813								Approximate Chi Square Value (0.05)	141.8			
814				Adjusted Level of Significance	0.0267			Adjusted Chi Square Value	137.2			
815												
816	**Assuming Gamma Distribution**											
817				95% Approximate Gamma UCL (use when n>=50))	1.508			95% Adjusted Gamma UCL (use when n<50)	1.559			
818												

819	**Lognormal GOF Test**											
820					Shapiro Wilk Test Statistic	0.366	**Shapiro Wilk Lognormal GOF Test**					
821					5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level					
822					Lilliefors Test Statistic	0.524	**Lilliefors Lognormal GOF Test**					
823					5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level					
824	**Data Not Lognormal at 5% Significance Level**											
825												
826	**Lognormal Statistics**											
827					Minimum of Logged Data	0.0953	Mean of logged Data	0.181				
828					Maximum of Logged Data	0.956	SD of logged Data	0.272				
829												
830	**Assuming Lognormal Distribution**											
831					95% H-UCL	1.484	90% Chebyshev (MVUE) UCL	1.561				
832					95% Chebyshev (MVUE) UCL	1.707	97.5% Chebyshev (MVUE) UCL	1.909				
833					99% Chebyshev (MVUE) UCL	2.306						
834												
835	**Nonparametric Distribution Free UCL Statistics**											
836	**Data do not follow a Discernible Distribution (0.05)**											
837												
838	**Nonparametric Distribution Free UCLs**											
839					95% CLT UCL	1.497	95% Jackknife UCL	N/A				
840					95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A				
841					95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A				
842					95% BCA Bootstrap UCL	N/A						
843					90% Chebyshev(Mean, Sd) UCL	1.7	95% Chebyshev(Mean, Sd) UCL	1.904				
844					97.5% Chebyshev(Mean, Sd) UCL	2.187	99% Chebyshev(Mean, Sd) UCL	2.742				
845												
846	**Suggested UCL to Use**											
847					95% Student's-t UCL	1.525	or 95% Modified-t UCL	1.55				
848												
849	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
850	Recommendations are based upon data size, data distribution, and skewness.											
851	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
852	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
853												

1	**UCL Statistics for Uncensored Full Data Sets**										
2	**PARC Area 8**										
3	User Selected Options										
4											
5	From File	WorkSheet_e.xls									
6	Full Precision	OFF									
7	Confidence Coefficient	95%									
8	Number of Bootstrap Operations	2000									
9											
10											
11	**Barium**										
12											
13	**General Statistics**										
14	Total Number of Observations	9					Number of Distinct Observations	8			
15							Number of Missing Observations	11			
16	Minimum	72					Mean	163.6			
17	Maximum	561					Median	116			
18	SD	152.5					Std. Error of Mean	50.83			
19	Coefficient of Variation	0.932					Skewness	2.747			
20											
21	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**										
22	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**										
23	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**										
24	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1**										
25											
26	**Normal GOF Test**										
27	Shapiro Wilk Test Statistic	0.59					**Shapiro Wilk GOF Test**				
28	5% Shapiro Wilk Critical Value	0.829					Data Not Normal at 5% Significance Level				
29	Lilliefors Test Statistic	0.375					**Lilliefors GOF Test**				
30	5% Lilliefors Critical Value	0.274					Data Not Normal at 5% Significance Level				
31	**Data Not Normal at 5% Significance Level**										
32											
33	**Assuming Normal Distribution**										
34	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**				
35	95% Student's-t UCL	258.1					95% Adjusted-CLT UCL (Chen-1995)	296.9			
36							95% Modified-t UCL (Johnson-1978)	265.8			
37											
38	**Gamma GOF Test**										
39	A-D Test Statistic	0.987					**Anderson-Darling Gamma GOF Test**				
40	5% A-D Critical Value	0.729					Data Not Gamma Distributed at 5% Significance Level				
41	K-S Test Statistic	0.284					**Kolmogorov-Smirnov Gamma GOF Test**				
42	5% K-S Critical Value	0.282					Data Not Gamma Distributed at 5% Significance Level				
43	**Data Not Gamma Distributed at 5% Significance Level**										
44											
45	**Gamma Statistics**										
46	k hat (MLE)	2.407					k star (bias corrected MLE)	1.679			
47	Theta hat (MLE)	67.95					Theta star (bias corrected MLE)	97.42			
48	nu hat (MLE)	43.33					nu star (bias corrected)	30.22			
49	MLE Mean (bias corrected)	163.6					MLE Sd (bias corrected)	126.2			
50							Approximate Chi Square Value (0.05)	18.66			
51	Adjusted Level of Significance	0.0231					Adjusted Chi Square Value	16.78			
52											

53	**Assuming Gamma Distribution**											
54	95% Approximate Gamma UCL (use when n>=50))				264.8		95% Adjusted Gamma UCL (use when n<50)				294.6	
55												
56	**Lognormal GOF Test**											
57	Shapiro Wilk Test Statistic				0.822		**Shapiro Wilk Lognormal GOF Test**					
58	5% Shapiro Wilk Critical Value				0.829		Data Not Lognormal at 5% Significance Level					
59	Lilliefors Test Statistic				0.229		**Lilliefors Lognormal GOF Test**					
60	5% Lilliefors Critical Value				0.274		Data appear Lognormal at 5% Significance Level					
61	**Data appear Approximate Lognormal at 5% Significance Level**											
62												
63	**Lognormal Statistics**											
64	Minimum of Logged Data				4.277		Mean of logged Data				4.875	
65	Maximum of Logged Data				6.33		SD of logged Data				0.618	
66												
67	**Assuming Lognormal Distribution**											
68	95% H-UCL				272.5		90% Chebyshev (MVUE) UCL				252.6	
69	95% Chebyshev (MVUE) UCL				296.8		97.5% Chebyshev (MVUE) UCL				358.2	
70	99% Chebyshev (MVUE) UCL				478.9							
71												
72	**Nonparametric Distribution Free UCL Statistics**											
73	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
74												
75	**Nonparametric Distribution Free UCLs**											
76	95% CLT UCL				247.2		95% Jackknife UCL				258.1	
77	95% Standard Bootstrap UCL				240.5		95% Bootstrap-t UCL				504.5	
78	95% Hall's Bootstrap UCL				610.7		95% Percentile Bootstrap UCL				260.1	
79	95% BCA Bootstrap UCL				316.1							
80	90% Chebyshev(Mean, Sd) UCL				316.1		95% Chebyshev(Mean, Sd) UCL				385.1	
81	97.5% Chebyshev(Mean, Sd) UCL				481		99% Chebyshev(Mean, Sd) UCL				669.3	
82												
83	**Suggested UCL to Use**											
84	95% H-UCL				272.5							
85												
86	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
87	Recommendations are based upon data size, data distribution, and skewness.											
88	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
89	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
90												
91	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**											
92	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**											
93	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**											
94	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**											
95												
96												

	A	B	C	D	E	F	G	H	I	J	K	L
97	**Copper**											
98												
99						**General Statistics**						
100					Total Number of Observations	9			Number of Distinct Observations	8		
101									Number of Missing Observations	11		
102					Minimum	7.8			Mean	45.64		
103					Maximum	148			Median	24		
104					SD	45.16			Std. Error of Mean	15.05		
105					Coefficient of Variation	0.989			Skewness	1.828		
106												
107					**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**							
108					**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**							
109					**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**							
110					**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1**							
111												
112						**Normal GOF Test**						
113					Shapiro Wilk Test Statistic	0.755			**Shapiro Wilk GOF Test**			
114					5% Shapiro Wilk Critical Value	0.829			Data Not Normal at 5% Significance Level			
115					Lilliefors Test Statistic	0.301			**Lilliefors GOF Test**			
116					5% Lilliefors Critical Value	0.274			Data Not Normal at 5% Significance Level			
117						**Data Not Normal at 5% Significance Level**						
118												
119						**Assuming Normal Distribution**						
120					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
121					95% Student's-t UCL	73.64			95% Adjusted-CLT UCL (Chen-1995)	80.21		
122									95% Modified-t UCL (Johnson-1978)	75.17		
123												
124						**Gamma GOF Test**						
125					A-D Test Statistic	0.532			**Anderson-Darling Gamma GOF Test**			
126					5% A-D Critical Value	0.734			Detected data appear Gamma Distributed at 5% Significance Level			
127					K-S Test Statistic	0.225			**Kolmogorov-Smirnov Gamma GOF Test**			
128					5% K-S Critical Value	0.284			Detected data appear Gamma Distributed at 5% Significance Level			
129						**Detected data appear Gamma Distributed at 5% Significance Level**						
130												
131						**Gamma Statistics**						
132					k hat (MLE)	1.539			k star (bias corrected MLE)	1.1		
133					Theta hat (MLE)	29.66			Theta star (bias corrected MLE)	41.49		
134					nu hat (MLE)	27.7			nu star (bias corrected)	19.8		
135					MLE Mean (bias corrected)	45.64			MLE Sd (bias corrected)	43.52		
136									Approximate Chi Square Value (0.05)	10.7		
137					Adjusted Level of Significance	0.0231			Adjusted Chi Square Value	9.326		
138												

139	**Assuming Gamma Distribution**											
140				95% Approximate Gamma UCL (use when n>=50)		84.43			95% Adjusted Gamma UCL (use when n<50)		96.91
141												
142	**Lognormal GOF Test**											
143				Shapiro Wilk Test Statistic		0.945			**Shapiro Wilk Lognormal GOF Test**			
144				5% Shapiro Wilk Critical Value		0.829			Data appear Lognormal at 5% Significance Level			
145				Lilliefors Test Statistic		0.187			**Lilliefors Lognormal GOF Test**			
146				5% Lilliefors Critical Value		0.274			Data appear Lognormal at 5% Significance Level			
147	**Data appear Lognormal at 5% Significance Level**											
148												
149	**Lognormal Statistics**											
150				Minimum of Logged Data		2.054			Mean of logged Data		3.462	
151				Maximum of Logged Data		4.997			SD of logged Data		0.878	
152												
153	**Assuming Lognormal Distribution**											
154				95% H-UCL		118			90% Chebyshev (MVUE) UCL		84.67	
155				95% Chebyshev (MVUE) UCL		102.9			97.5% Chebyshev (MVUE) UCL		128.2	
156				99% Chebyshev (MVUE) UCL		177.9						
157												
158	**Nonparametric Distribution Free UCL Statistics**											
159	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
160												
161	**Nonparametric Distribution Free UCLs**											
162				95% CLT UCL		70.41			95% Jackknife UCL		73.64	
163				95% Standard Bootstrap UCL		68.92			95% Bootstrap-t UCL		137.4	
164				95% Hall's Bootstrap UCL		209.4			95% Percentile Bootstrap UCL		72.2	
165				95% BCA Bootstrap UCL		76.2						
166				90% Chebyshev(Mean, Sd) UCL		90.81			95% Chebyshev(Mean, Sd) UCL		111.3	
167				97.5% Chebyshev(Mean, Sd) UCL		139.7			99% Chebyshev(Mean, Sd) UCL		195.4	
168												
169	**Suggested UCL to Use**											
170				95% Adjusted Gamma UCL		96.91						
171												
172	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
173	Recommendations are based upon data size, data distribution, and skewness.											
174	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
175	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
176												
177												

	A	B	C	D	E	F	G	H	I	J	K	L
178	**Lead**											
179												
180						**General Statistics**							
181					Total Number of Observations	17			Number of Distinct Observations	17		
182									Number of Missing Observations	3		
183					Minimum	1.1			Mean	61.5		
184					Maximum	328			Median	21		
185					SD	95.3			Std. Error of Mean	23.11		
186					Coefficient of Variation	1.55			Skewness	2.144		
187												
188						**Normal GOF Test**						
189					Shapiro Wilk Test Statistic	0.658			**Shapiro Wilk GOF Test**			
190					5% Shapiro Wilk Critical Value	0.892			Data Not Normal at 5% Significance Level			
191					Lilliefors Test Statistic	0.304			**Lilliefors GOF Test**			
192					5% Lilliefors Critical Value	0.207			Data Not Normal at 5% Significance Level			
193						**Data Not Normal at 5% Significance Level**						
194												
195						**Assuming Normal Distribution**						
196					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
197					95% Student's-t UCL	101.9			95% Adjusted-CLT UCL (Chen-1995)	112.4		
198									95% Modified-t UCL (Johnson-1978)	103.9		
199												
200						**Gamma GOF Test**						
201					A-D Test Statistic	0.516			**Anderson-Darling Gamma GOF Test**			
202					5% A-D Critical Value	0.793			Detected data appear Gamma Distributed at 5% Significance Level			
203					K-S Test Statistic	0.135			**Kolmogorov-Smirnov Gamma GOF Test**			
204					5% K-S Critical Value	0.22			Detected data appear Gamma Distributed at 5% Significance Level			
205						**Detected data appear Gamma Distributed at 5% Significance Level**						
206												
207						**Gamma Statistics**						
208					k hat (MLE)	0.56			k star (bias corrected MLE)	0.501		
209					Theta hat (MLE)	109.8			Theta star (bias corrected MLE)	122.8		
210					nu hat (MLE)	19.05			nu star (bias corrected)	17.02		
211					MLE Mean (bias corrected)	61.5			MLE Sd (bias corrected)	86.92		
212									Approximate Chi Square Value (0.05)	8.689		
213					Adjusted Level of Significance	0.0346			Adjusted Chi Square Value	8.07		
214												

215	**Assuming Gamma Distribution**											
216				95% Approximate Gamma UCL (use when n>=50)		120.5			95% Adjusted Gamma UCL (use when n<50)			129.7
217												
218	**Lognormal GOF Test**											
219				Shapiro Wilk Test Statistic		0.967			**Shapiro Wilk Lognormal GOF Test**			
220				5% Shapiro Wilk Critical Value		0.892			Data appear Lognormal at 5% Significance Level			
221				Lilliefors Test Statistic		0.115			**Lilliefors Lognormal GOF Test**			
222				5% Lilliefors Critical Value		0.207			Data appear Lognormal at 5% Significance Level			
223	**Data appear Lognormal at 5% Significance Level**											
224												
225	**Lognormal Statistics**											
226				Minimum of Logged Data		0.0953			Mean of logged Data			3.005
227				Maximum of Logged Data		5.793			SD of logged Data			1.655
228												
229	**Assuming Lognormal Distribution**											
230				95% H-UCL		376			90% Chebyshev (MVUE) UCL			163.6
231				95% Chebyshev (MVUE) UCL		207.1			97.5% Chebyshev (MVUE) UCL			267.4
232				99% Chebyshev (MVUE) UCL		385.8						
233												
234	**Nonparametric Distribution Free UCL Statistics**											
235	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
236												
237	**Nonparametric Distribution Free UCLs**											
238				95% CLT UCL		99.52			95% Jackknife UCL			101.9
239				95% Standard Bootstrap UCL		98.45			95% Bootstrap-t UCL			161.8
240				95% Hall's Bootstrap UCL		238.6			95% Percentile Bootstrap UCL			100.3
241				95% BCA Bootstrap UCL		112.4						
242				90% Chebyshev(Mean, Sd) UCL		130.8			95% Chebyshev(Mean, Sd) UCL			162.3
243				97.5% Chebyshev(Mean, Sd) UCL		205.8			99% Chebyshev(Mean, Sd) UCL			291.5
244												
245	**Suggested UCL to Use**											
246				95% Adjusted Gamma UCL		129.7						
247												
248	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
249	Recommendations are based upon data size, data distribution, and skewness.											
250	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
251	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
252												
253												

254	**Zinc**										
255											
256	**General Statistics**										
257				Total Number of Observations	9			Number of Distinct Observations	9		
258								Number of Missing Observations	11		
259				Minimum	29			Mean	185.8		
260				Maximum	920			Median	92		
261				SD	281.1			Std. Error of Mean	93.7		
262				Coefficient of Variation	1.513			Skewness	2.781		
263											
264	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**										
265	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**										
266	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**										
267	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1**										
268											
269	**Normal GOF Test**										
270				Shapiro Wilk Test Statistic	0.564			**Shapiro Wilk GOF Test**			
271				5% Shapiro Wilk Critical Value	0.829			Data Not Normal at 5% Significance Level			
272				Lilliefors Test Statistic	0.361			**Lilliefors GOF Test**			
273				5% Lilliefors Critical Value	0.274			Data Not Normal at 5% Significance Level			
274	**Data Not Normal at 5% Significance Level**										
275											
276	**Assuming Normal Distribution**										
277				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
278				95% Student's-t UCL	360			95% Adjusted-CLT UCL (Chen-1995)	432.7		
279								95% Modified-t UCL (Johnson-1978)	374.5		
280											
281	**Gamma GOF Test**										
282				A-D Test Statistic	0.857			**Anderson-Darling Gamma GOF Test**			
283				5% A-D Critical Value	0.743			Data Not Gamma Distributed at 5% Significance Level			
284				K-S Test Statistic	0.283			**Kolmogorov-Smirnov Gamma GOF Test**			
285				5% K-S Critical Value	0.287			Detected data appear Gamma Distributed at 5% Significance Level			
286	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**										
287											
288	**Gamma Statistics**										
289				k hat (MLE)	1			k star (bias corrected MLE)	0.741		
290				Theta hat (MLE)	185.8			Theta star (bias corrected MLE)	250.8		
291				nu hat (MLE)	18			nu star (bias corrected)	13.33		
292				MLE Mean (bias corrected)	185.8			MLE Sd (bias corrected)	215.9		
293								Approximate Chi Square Value (0.05)	6.118		
294				Adjusted Level of Significance	0.0231			Adjusted Chi Square Value	5.124		
295											

	Assuming Gamma Distribution	
95% Approximate Gamma UCL (use when n>=50)	404.9	95% Adjusted Gamma UCL (use when n<50) 483.4
	Lognormal GOF Test	
Shapiro Wilk Test Statistic	0.91	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.829	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.2	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.274	Data appear Lognormal at 5% Significance Level
Data appear Lognormal at 5% Significance Level		
	Lognormal Statistics	
Minimum of Logged Data	3.367	Mean of logged Data 4.647
Maximum of Logged Data	6.824	SD of logged Data 1.003
	Assuming Lognormal Distribution	
95% H-UCL	544.7	90% Chebyshev (MVUE) UCL 326.4
95% Chebyshev (MVUE) UCL	401.8	97.5% Chebyshev (MVUE) UCL 506.3
99% Chebyshev (MVUE) UCL	711.7	
	Nonparametric Distribution Free UCL Statistics	
	Data appear to follow a Discernible Distribution at 5% Significance Level	
	Nonparametric Distribution Free UCLs	
95% CLT UCL	339.9	95% Jackknife UCL 360
95% Standard Bootstrap UCL	333.6	95% Bootstrap-t UCL 1173
95% Hall's Bootstrap UCL	1062	95% Percentile Bootstrap UCL 359.3
95% BCA Bootstrap UCL	398.3	
90% Chebyshev(Mean, Sd) UCL	466.9	95% Chebyshev(Mean, Sd) UCL 594.2
97.5% Chebyshev(Mean, Sd) UCL	770.9	99% Chebyshev(Mean, Sd) UCL 1118
	Suggested UCL to Use	
95% Adjusted Gamma UCL	483.4	
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test		
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.		
Recommendations are based upon data size, data distribution, and skewness.		
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).		
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.		

338	**TPH-GRO**										
339											
340						**General Statistics**					
341					Total Number of Observations	5			Number of Distinct Observations	2	
342									Number of Missing Observations	15	
343					Minimum	1.1			Mean	1.14	
344					Maximum	1.3			Median	1.1	
345					SD	0.0894			Std. Error of Mean	0.04	
346					Coefficient of Variation	0.0785			Skewness	2.236	
347											
348					**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**						
349					**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**						
350					**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**						
351					**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1**						
352											
353						**Normal GOF Test**					
354					Shapiro Wilk Test Statistic	0.552			**Shapiro Wilk GOF Test**		
355					5% Shapiro Wilk Critical Value	0.762			Data Not Normal at 5% Significance Level		
356					Lilliefors Test Statistic	0.473			**Lilliefors GOF Test**		
357					5% Lilliefors Critical Value	0.343			Data Not Normal at 5% Significance Level		
358					**Data Not Normal at 5% Significance Level**						
359											
360						**Assuming Normal Distribution**					
361					**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
362					95% Student's-t UCL	1.225			95% Adjusted-CLT UCL (Chen-1995)	1.249	
363									95% Modified-t UCL (Johnson-1978)	1.232	
364											
365						**Gamma GOF Test**					
366					A-D Test Statistic	1.332			**Anderson-Darling Gamma GOF Test**		
367					5% A-D Critical Value	0.678			Data Not Gamma Distributed at 5% Significance Level		
368					K-S Test Statistic	0.492			**Kolmogorov-Smirnov Gamma GOF Test**		
369					5% K-S Critical Value	0.357			Data Not Gamma Distributed at 5% Significance Level		
370					**Data Not Gamma Distributed at 5% Significance Level**						
371											
372						**Gamma Statistics**					
373					k hat (MLE)	216.9			k star (bias corrected MLE)	86.88	
374					Theta hat (MLE)	0.00526			Theta star (bias corrected MLE)	0.0131	
375					nu hat (MLE)	2169			nu star (bias corrected)	868.8	
376					MLE Mean (bias corrected)	1.14			MLE Sd (bias corrected)	0.122	
377									Approximate Chi Square Value (0.05)	801.4	
378					Adjusted Level of Significance	0.0086			Adjusted Chi Square Value	772.6	
379											

Assuming Gamma Distribution		
95% Approximate Gamma UCL (use when n>=50))	1.236	95% Adjusted Gamma UCL (use when n<50) 1.282
Lognormal GOF Test		
Shapiro Wilk Test Statistic	0.552	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.762	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.473	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.343	Data Not Lognormal at 5% Significance Level
Data Not Lognormal at 5% Significance Level		
Lognormal Statistics		
Minimum of Logged Data	0.0953	Mean of logged Data 0.129
Maximum of Logged Data	0.262	SD of logged Data 0.0747
Assuming Lognormal Distribution		
95% H-UCL	N/A	90% Chebyshev (MVUE) UCL 1.254
95% Chebyshev (MVUE) UCL	1.306	97.5% Chebyshev (MVUE) UCL 1.378
99% Chebyshev (MVUE) UCL	1.519	
Nonparametric Distribution Free UCL Statistics		
Data do not follow a Discernible Distribution (0.05)		
Nonparametric Distribution Free UCLs		
95% CLT UCL	1.206	95% Jackknife UCL N/A
95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL N/A
95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL N/A
95% BCA Bootstrap UCL	N/A	
90% Chebyshev(Mean, Sd) UCL	1.26	95% Chebyshev(Mean, Sd) UCL 1.314
97.5% Chebyshev(Mean, Sd) UCL	1.39	99% Chebyshev(Mean, Sd) UCL 1.538
Suggested UCL to Use		
95% Student's-t UCL	1.225	or 95% Modified-t UCL 1.232
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.		
Recommendations are based upon data size, data distribution, and skewness.		
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).		
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.		

ATTACHMENT P

VDEQ Trench Model for Soil Gas

VDEQ Soil Gas Trench Model

~ Utility Trench Attenuation Factors ~

VDEQ SOIL GAS TRENCH MODEL (VDEQ, 2018 - Eqn. 2-12 and 2-13)

Parameter	Symbol	Value	Units
Air-filled porosity	AC_{vad}	0.244	-
Fraction of unsealed trench floor	F	1	-
Air changes per hour	ACH	60	hr^{-1}
Total porosity	P	0.319	-
Length of trench	L	100	m
Width of trench	W	1	m
Depth of trench	D	2	m
Volume of trench	V	200	m^3
Area of trench	A	100	m^2

Surrogates: TPH-GRO = Benzene, Ethanol = Methanol, and 1,2-Dichlorobenzene = 1,3-Dichlorobenzene

SOIL GAS COPC	D_{air} (cm^2/s)	D values (cm) =>	Attenuation factors (α_{trench} values; unitless) for different sample depths		
			5-foot sample depth	10-foot sample depth*	15-foot sample depth**
			1	104.8	257.2
Acetone	1.1E-01		2.8E-03	2.7E-05	1.1E-05
Acetonitrile	1.3E-01		3.6E-03	3.4E-05	1.4E-05
Benzene	9.0E-02		2.4E-03	2.3E-05	9.4E-06
Carbon Disulfide	1.1E-01		2.9E-03	2.7E-05	1.1E-05
Chlorobenzene	7.2E-02		1.9E-03	1.9E-05	7.5E-06
Chloroform	7.7E-02		2.1E-03	2.0E-05	8.0E-06
Chloromethane	1.2E-01		3.3E-03	3.2E-05	1.3E-05
Cyclohexane	8.0E-02		2.2E-03	2.1E-05	8.4E-06
Dichlorobenzene, 1,2-	5.6E-02		1.5E-03	1.4E-05	5.9E-06
Dichlorodifluoromethane	7.6E-02		2.0E-03	2.0E-05	7.9E-06
Dichloroethane, 1,1-	8.4E-02		2.2E-03	2.1E-05	8.7E-06
Ethyl Chloride (Chloroethane)	1.0E-01		2.8E-03	2.7E-05	1.1E-05
Ethylbenzene	6.8E-02		1.8E-03	1.8E-05	7.2E-06
Hexanone, 2-	7.0E-02		1.9E-03	1.8E-05	7.4E-06
Isopropanol	1.0E-01		2.8E-03	2.6E-05	1.1E-05
Methanol	1.6E-01		4.3E-03	4.1E-05	1.7E-05
2-Butanone	9.1E-02		2.5E-03	2.3E-05	9.6E-06
4-Methyl-2-Pentanone	7.0E-02		1.9E-03	1.8E-05	7.3E-06
Methylene Chloride	1.0E-01		2.7E-03	2.6E-05	1.0E-05
Naphthalene	6.0E-02		1.6E-03	1.6E-05	6.3E-06
Propyl benzene	6.0E-02		1.6E-03	1.5E-05	6.3E-06
Tetrachloroethylene	5.0E-02		1.4E-03	1.3E-05	5.3E-06
Toluene	7.8E-02		2.1E-03	2.0E-05	8.1E-06
Trichlorobenzene, 1,2,4-	4.0E-02		1.1E-03	1.0E-05	4.1E-06
Trichloroethane, 1,1,1-	6.5E-02		1.7E-03	1.7E-05	6.8E-06
Trichloroethylene	6.9E-02		1.8E-03	1.8E-05	7.2E-06
Trichlorofluoromethane	6.5E-02		1.8E-03	1.7E-05	6.8E-06
Trimethylbenzene, 1,2,4-	6.1E-02		1.6E-03	1.6E-05	6.3E-06
Trimethylbenzene, 1,3,5-	6.0E-02		1.6E-03	1.5E-05	6.3E-06
Vinyl Acetate	8.5E-02		2.3E-03	2.2E-05	8.9E-06
Vinyl Chloride	1.1E-01		2.9E-03	2.7E-05	1.1E-05
Xylene, m-	6.8E-02		1.8E-03	1.8E-05	7.1E-06
Xylene, o-	6.9E-02		1.9E-03	1.8E-05	7.2E-06
Xylene, p-	6.8E-02		1.8E-03	1.8E-05	7.1E-06
Xylenes	6.9E-02		1.8E-03	1.8E-05	7.2E-06
TPH-GRO	9.0E-02		2.4E-03	2.3E-05	9.4E-06
Trichloroethane, 1,1,2-	6.7E-02		1.8E-03	1.7E-05	7.0E-06
Dichloroethene, 1,1-	8.6E-02		2.3E-03	2.2E-05	9.0E-06

Equation (2-11) simplifies to the following:

$$C_{trench} = C_{sg} \times \frac{D_{air} \times AC_{vad}^{3.33} \times A \times F \times 10^4 \times 3600}{L_d \times ACH \times V \times Por_{vad}^{2} \times 10^5} \qquad (2\text{-}12)$$

$C_{trench} = C_{sg} \times VF_{sg}$

Hence,

$$VF_{sg} = \frac{D_{air} \times AC_{vad}^{3.33} \times A \times F \times 10^4 \times 3600}{L_d \times ACH \times V \times Por_{vad}^{2} \times 10^5} \qquad (2\text{-}13)$$

Where:

H_i	= Henry's Law constant for contaminant (RSL table)	atm-m³/mol
D_{air}	= diffusion coefficient in air (RSL table)	cm^2/s
AC_{vad}	= volumetric air content in vadose zone soil	cm^3/cm^3
A	= area of trench	m^2
F	= fraction of floor through which contaminant can enter	Unit less
R	= ideal gas constant	atm-m³/ mole-K
T	= average system absolute temperature	K
L_d	= distance between trench bottom and groundwater* (equation 2-3)	cm
ACH	= air changes per hour	h^{-1}
V	= volume of trench	m^3
Por_{vad}	= total soil porosity in vadose zone	cm^3/cm^3
10^{-5}	= conversion factor	L/cm³
10^4	= conversion factor	cm^2/m^2
3600	= conversion factor	s/hr

*Ld = 1 cm (instead of 31 cm; as assumed in groundwater model
Construction worker trench dimensions remain consistent with groundwater equations.

This model can be used to estimate the contaminant concentration in soil vapor partitioning from the groundwater concentration; the contaminant is then transported by diffusion to the trench base or face (where applicable) and diluted by mixing within the trench. In order to accommodate for the assumption that the construction worker could intersect with the sample collection depth, distance between the trench bottom and vapor source (L_d) is modified to 1cm.

Virginia DEQ Construction Worker in Trench Groundwater and Soil Gas model was reviewed by Contaminated Sites Approved Professionals of British Columbia (CSAP) Society in (Meridian, 2012).