AEI Consultants

June 18, 2018, Revised August 24, 2018

LIMITED PHASE II SUBSURFACE INVESTIGATION

Property Identification:
325 Yolanda Avenue & 2532 Santa Rosa Avenue
Santa Rosa, Sonoma County, California 95407

AEI Project No. 387046

Prepared for:
Wolff Enterprises II, LLC
6710 East Camelback Road, Suite 100
Scottsdale, Arizona 85251

Prepared by:
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Environmental & Engineering Due Diligence

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TABLE OF CONTENTS

AEI Consultants

August 24, 2018

Mr. Nate Carlson
Wolff Enterprises II, LLC
6710 East Camelback Road, Suite 100
Scottsdale, Arizona 85251

Subject: **Limited Phase II Subsurface Investigation**
325 Yolanda Avenue & 2532 Santa Rosa Avenue
Santa Rosa, Sonoma County, California 95407
AEI Project No. 387046

Dear Mr. Carlson:

This report presents the results of the Limited Phase II Subsurface Investigation (Phase II) performed by AEI Consultants (AEI) at 325 Yolanda Avenue & 2532 Santa Rosa Avenue, Santa Rosa, California ("the Site"). The investigation was completed in general accordance with the scope of services outlined in our proposal dated May 4, 2018 (AEI Proposal Number 57981R), which was subsequently authorized by Wolff Enterprises II, LLC on May 4, 2018.

The purpose of this investigation was to assess the presence/absence of impacted subsurface conditions (i.e., soil and soil gas) that may be associated with former underground storage tanks (USTs) at the Site and historical agricultural operations. Information regarding the site description, background, scope of work, findings, conclusions, and recommendations are provided in the following sections.

1.0 SITE DESCRIPTION

The Site is approximately 10.46 acres located on the north side of Yolanda Avenue and eastern side of Santa Rosa Avenue in Santa Rosa, California. The Site is currently a one-story warehouse planned for redevelopment with an apartment complex and is improved with asphalt and gravel-covered areas and landscaped areas. The location of the Site is shown on Figure 1. Figure 2 and Figure 3 present the Site maps.

Groundwater monitoring data obtained from the State of California GeoTracker database for a nearby property indicated that the depth to groundwater is approximately 6.68 to 10.99 feet below ground surface (bgs). Regional topography suggests that the inferred direction of groundwater flow beneath the Site is to the southwest direction.

2.0 BACKGROUND

A *Phase I Environmental Site Assessment (ESA)* was conducted by AEI and is presented in a report dated April 30, 2018. According to client-provided site plans, the Site is planned for redevelopment with an apartment complex development consisting of 11 apartment buildings,

one clubhouse building with a swimming pool, and four parking structures across the majority of the Site, with an In-N-Out fast food restaurant and parking lot on the northwest portion. In 2016 as part of the case closure activities for the closed leaking underground storage tank (LUST) case, soil vapor testing in the area of the former on-site gasoline USTs was performed in the southwest portion of the Site. A 2016 soil vapor investigation identified concentrations of benzene in 2016 soil gas probes SV-1, SV-4, SV-5, and SV-7 at a maximum concentration of 57 micrograms per meter cubed (µg/m^3), slightly above the Regional Water Quality Control Board (RWQCB) residential environmental screening level (ESL) for benzene of 48.5 µg/m^3. As the soil vapor testing results were above the residential ESL near an area with planned redevelopment with an apartment building, this finding was considered to be a REC. Based on a review of aerial photographs, the Site was also historically used for agricultural purposes. Therefore, there is the potential that organochlorine (OC) pesticides and/or arsenic and lead containing pesticides may have been used on the Site and was considered an Other Environmental Consideration (OEC).

3.0 SCOPE OF WORK

AEI was requested to perform an investigation, including advancing 20 shallow soil borings for the collection of soil samples and four soil gas probes for the collection of soil gas samples. The soil boring and soil gas probe locations are shown on Figure 2 and Figure 3. The completed activities are summarized below.

3.1 Health and Safety Plan

A site-specific health and safety plan was prepared, reviewed by onsite personnel, and kept onsite for the duration of the fieldwork.

3.2 Utility Clearance and Permits

Drilling permit was obtained from the County of Sonoma Department of Health Services for this investigation. A copy of the drilling permit is provided in Appendix A.

Prior to drilling activities, proposed boring locations were marked on the ground surface with white paint. Upon marking, Underground Service Alert (USA) 811 North was contacted, who, in turn, notified subscribing utility companies of the planned investigation work for underground utility locations to be marked along the ground surface around the Site boundaries and proposed boring locations, where accessible. Private utility locating was conducted by Foresite of Pleasant Hill, California under subcontract to AEI to further identify and locate underground utilities on the Site, and to shift boring locations, as appropriate.

3.3 Exploratory Borings

On May 25, 2018, 20 shallow soil borings (SB-1A-D through SB-5A-D) and four soil gas probes (SV-1 through SV-4) were advanced at the Site. AEI contracted a State of California-licensed company, Environmental Control Associates of Aptos, California to advance each of the soil borings using a direct push, truck-mounted drill rig. The location and purpose of each boring are listed below:

- Borings SB-1A-D through SB-5A-D were advanced to a depth of two-2 feet bgs and evenly spaced across the Site for soil sample collection to assess historical agricultural use at the Site.
- Soil gas probes SV-1 through SV-4 were advanced to a depth of 5.5-feet bgs for the collection of soil gas samples in the vicinity of the 2016 soil gas probes SV-1, SV-4, SV-5, and SV-7 that exhibited benzene concentrations in soil gas in 2016.

The locations of the soil borings and soil gas probes were chosen in part based on access availability due to existing landscaping (trees, brush, and tall grasses), pavement, and utility clearance at the Site. Soil borings and soil gas probe locations are shown on Figure 2 and Figure 3.

3.3.1 Soil Sampling

During soil boring advancement, soil borings SB-1A-D through SB-5A-D and SV-1 through SV-4 were continuously sampled throughout their entire depths for the purposes of lithologic logging, field screening (headspace testing), and laboratory analyses. Soil samples were obtained using a single-walled coring system approximately 2.25 inches in diameter and 2 or 4 feet in length containing plastic liners. The coring system was connected to 1-inch diameter, flush-jointed drill rod that was hydraulically driven (pushed) by the rig to each target sample depth. Upon retrieval from each sample depth interval, the coring system was opened, and the plastic liners were removed and cut for visual inspection and lithologic logging purposes. Recovered soil samples were examined for soil classification and described on detailed boring logs in general conformance with the Unified Soil Classification System (USCS). Additional lithologic descriptions and drilling information were recorded on the boring logs, presented in Appendix B.

Upon sample collection, the ends of the plastic tubes were sealed with Teflon™ tape and capped. The samples were labeled with the project name, project number, boring number, sample depth, and sampling date/time of sampling. After labelling, the samples were placed into a chilled ice chest containing crushed ice for transport to the analytical laboratory. Chain-of-custody documentation was completed and accompanied the samples to the analytical laboratory.

3.3.2 Soil Gas Probe Installation

Four soil gas probes (SV-1 through SV-4) were installed at the Site as shown on Figure 2. The soil gas probes were installed and sampled in general accordance with the guidelines presented in the *Advisory: Active Soil Gas Investigations*, prepared by the California Department of Toxic Substances Control (DTSC), et al., dated July 2015.

Construction of soil gas probes began by advancing a borehole to approximately 5.5 feet bgs. Clean, dry sand (Lonestar No. 2/12 sand) was then backfilled into the bottom of the borehole to 5.0 feet bgs. This was followed by the installation of a temporary soil gas probe attached to inert 0.25-inch diameter Teflon™ tubing extending to the top of the sand pack. The soil gas probe was positioned at approximately 5 feet bgs in the boring. After the probe and tubing were set in place, an additional 6 inches of clean, dry sand was added above the tip of the probe. The borehole annulus above the sand pack was then filled with approximately 1 foot of dry granular bentonite, followed by the placement of hydrated granular bentonite to grade.

3.3.3 Soil Gas Sampling

After waiting approximately 120 minutes for the probe locations to equilibrate with the surrounding material, a shut-in test was performed to check for leaks in the above-ground sampling manifold. The shut-in test was performed by exerting a vacuum on the sealed above-ground manifold with a six-liter purge canister for at least one minute or longer. If there was any observable loss of vacuum, the fittings were adjusted until the vacuum in the sample train did not noticeably dissipate. Fittings used for the soil gas sampling train consisted of Swagelok® type fittings. A total of three volumes of air were purged from the annular space and tubing prior to collecting a sample through a laboratory-supplied regulator set at 200 milliliters per minute.

Following the shut-in test and purging, a soil gas sample was collected from the soil gas probes. A leak check was performed at each location by introducing and maintaining helium in the ambient air within a plastic shroud placed around the sample apparatus for the duration of the sample collection. The soil gas sample was collected using a laboratory-provided sampling manifold (sampling train) with an average flow rate of 200 milliliters per minute, into a one-liter Summa™ canister. Initial and final readings on the vacuum gauge were recorded at the beginning and end of sampling to confirm sample collection. Sampling was completed with a slight vacuum [of approximately -5 inches of mercury(Hg)] remaining in the canisters. Upon sample retrieval, the Summa™ canisters were labeled with the appropriate project information, including the project name, project number, sample location and depth, date and time of sampling, sampler's name, canister identification number, and the initial and final canister vacuums. Chain-of-custody documentation was completed and accompanied the Summa™ canisters to the analytical laboratory.

3.3.4 Boring and Soil Gas Probe Destruction

Upon completion of sample collection and removal the probe construction materials, the borings and soil gas probes were backfilled with a neat cement grout. The grout mixture consisted of one, 94-pound bag of Portland Type I/II cement to every five-gallons of water.

3.4 Investigation-Derived Waste

Investigation-derived waste was left onsite in two labelled, sealed, five-gallon bucket. Disposition of the waste(s) will be dependent upon the analytical results. Upon receipt of the laboratory analytical results and waste profiling, removal and transport of the waste(s) to an appropriate disposal facility can be arranged and implemented upon client approval.

3.5 Laboratory Analyses

The soil and soil gas samples were submitted to a State of California certified laboratory, ESC Lab Sciences of Mount Juliette, Tennessee for analyses. The soil samples from borings SB-1A-D through SB-5A-D at 0.5 feet bgs were composited into five four-point composites by the laboratory for analysis of organochlorine pesticides (OCP) using United States Environmental Protection Agency (US EPA) Testing Method 8081A. Five discrete samples borings SB-1A-D through SB-5A-D were analyzed for arsenic and lead using US EPA Testing Method 6010B. Soil gas samples were analyzed for VOCs using US EPA Testing TO-15 and helium as a leak check compound using ASTM D Test Method 1946-90.

Upon receipt and review of the initial laboratory data, discrete samples from COMP-5, SB-5A through SB-5D at 0.5 feet bgs and discrete samples SB-5A through SB-5D at 2 feet bgs were further analyzed for OCPs using US EPA Testing Method 8081A.

Chain-of-custody documentations and the certified analytical reports are provided in Appendix C.

4.0 FINDINGS

4.1 Subsurface Conditions

Subsurface conditions observed during the drilling activities of borings SB-1A-D through SB-5A-D and SV-1 through SV-4 indicate that the Site is primarily underlain by sediment including silt, sandy silt, clay, and silty clay to the maximum depth investigated (5.5 feet bgs). Groundwater was not encountered during drilling activities. There were no visual or olfactory evidence (i.e., soil discoloration, odor) of potentially-impacted soils observed in soils that were recovered during drilling activities.

4.2 Analytical Results

For the purpose of providing context to the data obtained during this investigation, analytical results are compared to available regulatory screening levels. The RWQCB ESLs and the State Water Resource Control Board's (SWRCB) Low Threat Closure Policy (LTCP) soil gas criteria (no bioattenuation zone) were used for comparison values under a residential land use scenario for this investigation. The ESLs and soil gas criteria are considered to be conservative. Under most circumstances, and within the limitations described in the ESLs and soil gas criteria, the presence of a chemical in soil or soil gas at concentrations below the corresponding ESL and soil gas criteria may be assumed to not pose a significant threat to human health and the environment. Additional evaluation may be necessary at sites where a chemical is present at concentrations above the corresponding ESL and soil gas criteria.

4.2.1 Soil Sample Analytical Results

Tables 1 presents a summary of the soil sample analytical results, and laboratory analytical documentation is provided in Appendix C. The results can be summarized as follows:

Agricultural Sampling

- Several OCPs including chlordane, 4,4-dichlorodiphenyldichloroethane (4,4-DDD) 4,4-dichlorodiphenyldichloroethylene (4,4-DDE), and 4,4-dichlorodiphenyltrichloroethane (4,4-DDT) were detected in the shallow soil samples collected from the Site.
    - Chlordane was detected in a composite sample from boring SB-5A-D (COMP-5) at a concentration of 1.79 milligrams per kilogram (mg/kg), which is above the applicable Tier 1 and direct contact residential ESLs of 0.48 mg/kg. Chlordane was not detected at or above the laboratory method reporting limits (MRLs) in the other four compositions samples (COMP-1, COMP-2, COMP-3, and COMP-4).
    - The discrete samples from COMP-5 (SB-5A through SB-D at 0.5 feet bgs) and the discrete samples SB-5A through SB-5D at 2 feet bgs were further analyzed for OCPs to further evaluate the elevated chlordane. Results from the discrete analysis indicate

that elevated chlordane was detected in sample SB-5A at 0.5 feet bgs at a concentration of 8.70 mg/kg, which exceed the applicable Tier 1 and direct contact residential ESLs of 0.48 mg/kg. Chlordane was not detected at or above the laboratory MRLs in the deeper 2 feet bgs sample at location SB-5A. In addition, low levels of chlordane were detected in SB-5B and SB-5C at concentrations of 0.114 mg/kg and 0.116 mg/kg, which is protective of the applicable Tier 1 and direct contact residential ESLs of 0.48 mg/kg.

- Low concentrations of 4,4-DDE and 4,4-DDT were detected in the composition sample COMP-4 at concentrations of 0.00125 mg/kg and 0.00153 mg/kg, respectively. The concentrations are protective of the applicable Tier 1 and direct contact residential ESLs of 1.9 mg/kg.
- Concentrations of 4,4-DDT were detected in discrete samples SB-5A, SB-5B, SB-5C, and SB-5D at 0.5 feet bgs at concentrations of 0.029 mg/kg, 0.00354 mg/kg, 0.00132 mg/kg, and 0.00258 mg/kg, respectively. The concentrations are protective of the applicable Tier 1 and direct contact residential ESLs of 1.9 mg/kg. Concentrations of 4,4-DDT were not detected at or above the laboratory MRL in each of the respective deeper 2 feet bgs samples.
- Concentrations of 4,4-DDD were detected in discrete sample SB-5D at 0.5 feet bgs at a concentration of 0.00105 mg/kg. The concentration is protective of the applicable Tier 1 and direct contact residential ESLs of 2.7 mg/kg. Concentrations of 4,4-DDD were not detected at or above the laboratory MRL in the deeper 2 feet bgs sample.

- Arsenic and lead were detected in discrete soil samples collected from soil borings SB-1D through SB-5D.
  - Lead concentrations ranged from 6.83 mg/kg to 38.2 mg/kg. The detected concentrations of lead were protective of the applicable Tier 1 and direct contact residential ESLs of 80 mg/kg.
  - Arsenic concentrations ranged from 1.26 mg/kg to 6.43 mg/kg. The detected arsenic concentrations were found to exceed applicable Tier 1 and direct contact residential ESLs (0.067 mg/kg); however, the detected concentrations of arsenic in shallow soils at the Site are found to be within the range of naturally-occurring background levels (upper limit of 11 mg/kg) in San Francisco Bay Area Holocene alluvium soils (Duverge, 2011). Research studies performed in other portions of the San Francisco Bay Area (Lawrence Berkeley National Laboratory, 2002; Scott, 1991) and nationwide (Shacklette and Boerngen, 1984) have cited larger ranges of background arsenic concentrations.

4.2.2 Soil Gas Analytical Results

Table 2 presents a summary of the soil gas sample analytical results, and laboratory analytical documentation is provided in Appendix C. The results can be summarized as follows:

- The soil gas samples yielded benzene, toluene, ethylbenzene, and total xylenes (collectively "BTEX compounds") concentrations of 50.9 µg/m^3 (SV-1) 138 µg/m^3 (SV-3),47.1 µg/m^3 (SV-1) and 244 µg/m^3 (SV-1), respectively. The concentration of benzene in SV-1 (50.9 µg/m^3) was observed is slightly above the applicable ESL of 48 µg/m^3; however, is below the SWRCB

LTCP soil gas criteria of 85 µg/m^3. The other detected concentrations did not exceed the applicable ESLs for residential vapor intrusion.

- Several additional VOCs were detected in the soil gas samples collected and analyzed as shown on Table 2; however, the detected VOCs were below their applicable ESLs for residential vapor intrusion.
- The leak check compound helium was not detected in the soil gas samples collected indicating that a significant leak was not present during sampling and the results collected are therefore considered valid for their intended purpose.

5.0 SUMMARY AND CONCLUSIONS

AEI performed a limited Phase II subsurface investigation at the Site as described above. The purpose of this investigation was to assess whether subsurface conditions (i.e., soil and soil gas) associated with the former USTs and historical agricultural operations have significantly affected the Site. Twenty shallow soil borings and four soil gas probes were advanced during the investigation for the collection of soil and soil gas samples. Soil samples collected were analyzed for OCPs, arsenic, lead, and VOCs. Soil gas samples collected were analyzed for VOCs.

Analytical results generated during this investigation indicate the following:

- Shallow soil sample results for the agricultural investigation indicated elevated concentrations of chlordane in the composition soil sample (COMP-5) collected from soil borings SB-5A through SB-5D at 0.5 feet bgs that exceed the applicable Tier 1 and direct contact residential ESLs. Further analysis of the discrete soil samples from COMP-5 indicate that the elevate chlordane was primarily from the soil sample collected from soil boring SB-5A at a depth of 0.5 feet bgs. Chlordane was not detected at or above the laboratory MRLs in the deeper two-foot bgs sample at location SB-5A. Based on the results, the residual chlordane concentrations are likely limited in vertical and lateral extent. In addition, arsenic was detected at concentrations ranging from 1.26 mg/kg to 6.43 mg/kg, which is consistent with typical background concentrations (up to 11 mg/kg) for the Bay Area (Duvergé, 2011). Based on the elevated chlordane concentrations detected in SB-5A at 0.5 feet bgs, AEI recommends a Site Management Plan for the northwestern portion of the Site to manage exposure to soils that could be potentially impacted with elevated residual chlordane concentrations.

- Soil gas sample results from the former UST area indicates that low concentrations of BTEX compounds were detected in each of the four soil gas samples analyzed. Results from soil gas probe SV-1, advanced near 2016 soil gas sample SV-5 indicate a benzene concentration of 50.9 µg/m^3, slightly lower than 2016 soil gas probe SV-5 result of 57 µg/m^3. Although the concentration is slightly above the residential ESL of 48 µg/m^3, it is below the LTCP residential soil gas criteria of 85 µg/m^3. Based on the results, a small area of residual hydrocarbons is likely still present beneath the Site in the vicinity of the former gasoline USTs. AEI recommends to implement the *Revised Soil and Groundwater Management Plan and Health and Safety Plan* prepared by Environmental Geology Services dated May 12, 2017 to manage impacted soil in the southwestern portion of the Site that may be identified during the Site redevelopment.

6.0 REFERENCES

AEI Consultants, 2018, *Phase I Environmental Site Assessment*, *325 Yolanda Avenue & 2532 Santa Rosa Avenue, Santa Rosa, Sonoma County, California 95407,* technical report prepared Wolff Enterprises II, LLC, dated April 30, 2018.

California Department of Toxic Substances Control, et al., 2015. *Advisory: Active Soil Gas Investigations*. July.

California Department of Toxic Substances Control, et al., 2011. *Final: Vapor Intrusion Guidance*. October.

Duverge, D.J., 2011*, Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region*, San Francisco State University, MS thesis, dated December 2011.

San Francisco Bay Regional Water Quality Control Board, 2016, *Environmental Screening Levels* (ESLs), February 2016, revision 3.

7.0 REPORT LIMITATIONS AND RELIANCE

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, subject to scope of work for which AEI was retained and limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the subject property. Undocumented, unauthorized releases of hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

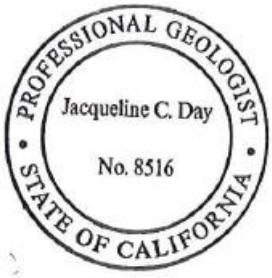
Any conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work. No other warranty, either expressed or implied, has been made.

This investigation was prepared for the sole use and benefit of Wolff Enterprises II, LLC. All reports, both verbal and written, whether in draft or final, are for the benefit of Wolff Enterprises II, LLC. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by Wolff Enterprises II, LLC. The limitation

of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

If there are any questions regarding our investigation, please do not hesitate to contact AEI at (925) 746-6000.

Sincerely,
AEI Consultants



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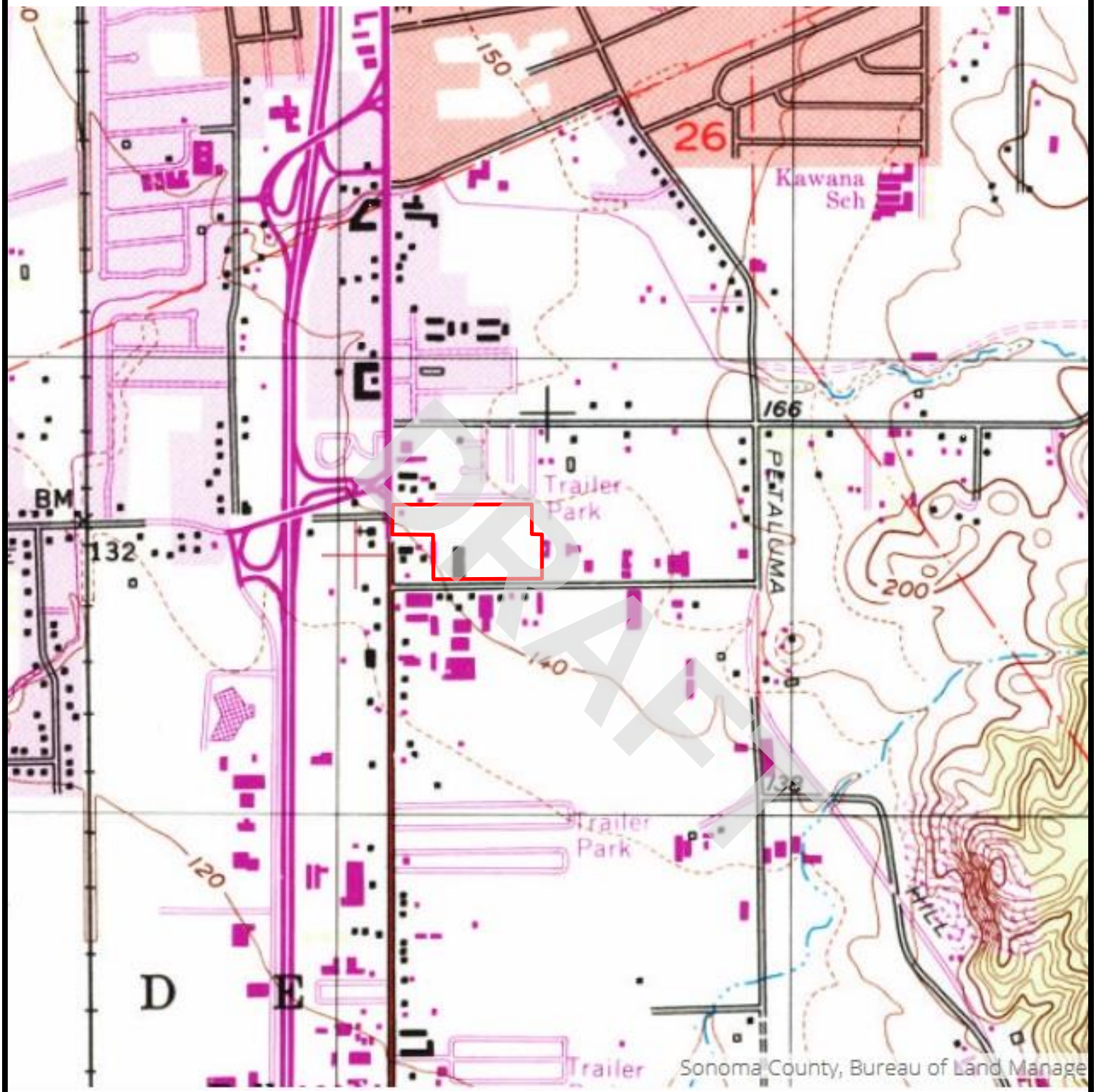
FIGURES



Legend
Approximate Property Boundary
Source: USGS Topographic Map *Santa Rosa, CA* (1994)

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Figure 1: SITE LOCATION MAP

325 Yolanda Avenue and 2532 Santa Rosa Avenue, Santa Rosa, CA 95407
Project Number: 387046

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LEGEND

- Approximate Property Boundary
- Soil Gas Probe Location
- Approximate Location of Existing Underground Storage Tanks
- Soil Gas Probe Location (TEG 2016)

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2500 Camino Diablo, Walnut Creek, California

SITE MAP

325 Yolanda Avenue &
2532 Santa Rosa Avenue,
Santa Rosa, California 95407

FIGURE 2
Project No. 387046

LEGEND

- Approximate Property Boundary
- Soil Sampling Location
- Estimated Groundwater Flow Direction

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SITE MAP

325 Yolanda Avenue &
2532 Santa Rosa Avenue
Santa Rosa, CA 95407

FIGURE 3
Project No. 387046

TABLES

TABLE 1: SOIL SAMPLE DATA SUMMARY
325 Yoland Avenue 2532 Santa Rosa Avenue
Santa Rosa, California, 95407

Location ID	Date	Depth (feet bgs)	Chlordane (mg/kg)	4,4-DDD (mg/kg)	4,4-DDE (mg/kg)	4,4-DDT (mg/kg)	Other Pesticides (mg/kg)	Arsenic (mg/kg)	Lead (mg/kg)
COMPOSITE SAMPLE RESULTS									
COMP-1	5/11/2018	0.5	<0.216	<0.0216	<0.0216	0.00116 J	<MRL	NA	NA
COMP-2	5/11/2018	0.5	<0.219	<0.0219	<0.0219	<0.0219	<MRL	NA	NA
COMP-3	5/11/2018	0.5	<0.223	<0.0223	<0.0223	<0.0223	<MRL	NA	NA
COMP-4	5/11/2018	0.5	<0.217	<0.0217	0.00125 J,P	0.00153 J	<MRL	NA	NA
COMP-5	5/11/2018	0.5	**1.79**	<0.0214	<0.0214	0.0104 J	<MRL	NA	NA
DISCRETE SAMPLE RESULTS									
SB-1D	5/11/2018	0.5	NA	NA	NA	NA	NA	**1.97 J**	6.83
SB-2D	5/11/2018	0.5	NA	NA	NA	NA	NA	**1.26 J**	18.2
SB-3D	5/11/2018	0.5	NA	NA	NA	NA	NA	**5.04**	6.97
SB-4D	5/11/2018	0.5	NA	NA	NA	NA	NA	**6.43**	38.2
SB-5A	5/11/2018	0.5	**8.70**	<0.0208	<0.0208	0.029	<MRL	NA	NA
SB-5A	5/11/2018	2	<0.231	<0.0231	<0.0231	<0.0231	<MRL	NA	NA
SB-5B	5/11/2018	0.5	0.114 J	<0.0228	<0.0228	0.00354 J	<MRL	NA	NA
SB-5B	5/11/2018	2	<0.234	<0.0234	<0.0234	<0.0234	<MRL	NA	NA
SB-5C	5/11/2018	0.5	0.116 J	<0.0221	<0.0221	0.00132 J	<MRL	NA	NA
SB-5C	5/11/2018	2	<0.232	<0.0232	<0.0232	<0.0232	<MRL	NA	NA
SB-5D	5/11/2018	0.5	<0.215	0.00105 J	<0.0215	0.00258 J	<MRL	**2.95**	37.3
SB-5D	5/11/2018	2	<0.228	<0.0228	<0.0228	<0.0228	<MRL	NA	NA
Comparison Values:									
Tier 1			**0.48**	2.7	1.9	1.9	Various	**0.067** [1]	80
ESL - Residential Shallow Soil			**0.48**	2.7	1.9	1.9	Various	**0.067** [1]	80

Notes:

mg/kg	milligrams per kilogram
<MRL	less than the laboratory method reporting limit
NA	not analyzed
bgs	below ground surface
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
Bold	Result exceeds a regulatory screening level
J	The identification of the analyte is acceptable; the reported value is an estimate.
P	Agreement between quantitative confirmation results exceed method recommended limits.
[1]	Arsenic concentrations from Establishing Background Arsenic in Soil of the San Francisco Bay Region, December 2011 study indicate background levels of arsenic in California Bay Area soil has background upper limit of 11 mg/kg.

Comparison Values:

ESL Direct Contact: Direct Exposure Human Health for Residential Shallow Soil Exposure; Environmental Screening Levels (ESLs) from February 2016 (Rev. 3) ESL Summary Tables, prepared by the San Francisco Bay Regional Water Quality Control Board

TABLE 2: SOIL GAS SAMPLE DATA SUMMARY
325 Yoland Avenue & 2532 Santa Rosa Avenue
Santa Rosa, California, 95407

Location ID	Date	Depth (feet bgs)	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethylbenzene (µg/m^3)	Total Xylenes (µg/m^3)	PCE (µg/m^3)	Acetone (µg/m^3)	1,3-Butadiene (µg/m^3)	Carbon Disulfide (µg/m^3)	Chloromethane (µg/m^3)	Cylohexane (µg/m^3)	Ethanol (µg/m^3)	4-Ethyltoluene (µg/m^3)	Heptane (µg/m^3)	n-Hexane (µg/m^3)
SV-1	5/25/2018	5	**50.9**	68.5	47.1	244	<2.72	117	55.2	20.5	2.99	66.2	82.0	8.31	49.5	841
SV-2	5/25/2018	5	41.1	117	16.9	70.0	<2.72	91.8	16.7	11.8	3.13	24.5	93.5	5.22	45.0	69.3
SV-3	5/25/2018	5	37.4	138	12.9	52.7	4.34	144	23.7	12.0	2.33	24.3	119	<1.96	30.6	116
SV-4	5/25/2018	5	30.3	59.1	7.56	32.7	3.12	62.3	16.2	12.3	2.67	56.6	58.7	2.82	26.6	48.1
Comparison Values:																
RWQCB ESL$_{VI}$ Residential:			**48**	160,000	560	52,000	240	16,000,000	--	---	47,000	---	---	---	---	---
CWRCB LTCP:			85	---	1,100	---	---	---	---	---	---	---	---	---	---	---

Notes:

µg/m^3	micrograms per cubic meter
<MRL	less than the laboratory method reporting limit
---	No established comparison value
bgs	below ground surface
PCE	Tetrachloroethene
Bold	Result exceeds a Comparison Value

Comparison Values:

RWQCB ESL$_{VI}$ Residential: San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for subslab/soil gas vapor intrusion human health risk levels under a residential (Residential) subslab/soil gas vapor intrusion human health risk levels under a residential (Residential)

CWRCB LTCP: Califorina State Water Resources Control Board Low-Threat Underground Storage Tank Case Closure Policy where no bioattenuation is present (Aug 2012)

TABLE 3: SOIL GAS SAMPLE DATA SUMMARY
325 Yoland Avenue & 2532 Santa Rosa Avenue
Santa Rosa, California, 95407

Location ID	Date	Depth (feet bgs)	Isopropyl-benzene (µg/m^3)	Methylene Chloride (µg/m^3)	2-Butanone (µg/m^3)	2-Propanol (µg/m^3)	Propene (µg/m^3)	Styrene (µg/m^3)	1,2,4-Trimethylbenzene (µg/m^3)	1,3,5-Trimethylbenzene (µg/m^3)	2,2,4-Trimethylpentane (µg/m^3)	1,1-Difluoroethane (µg/m^3)	Remaining VOCs (µg/m^3)	Helium (Leak Check) (%)
SV-1	5/25/2018	5	1.97	<1.39	33.4	<6.15	964	<1.70	7.06	4.12	27.5	26.2	<MRL	<0.0%
SV-2	5/25/2018	5	<1.97	<1.39	36.3	<6.15	433	2.41	4.11	<1.96	65.0	7.73	<MRL	<0.0%
SV-3	5/25/2018	5	<1.97	2.24	35.5	45.5	193	2.39	3.72	<1.96	39.8	39.9	<MRL	<0.0%
SV-4	5/25/2018	5	<1.97	<1.39	18.0	<6.15	131	<1.70	2.47	<1.96	24.1	14.6	<MRL	<0.0%
Comparison Values:														
RWQCB ESL$_{VI}$ Residential:			---	510	---	---	---	470,000	---	---	---	---	Various	---
CWRCB LTCP:			---	---	---	---	---	---	---	---	---	---	Various	---

Notes:

µg/m^3	micrograms per cubic meter
<MRL	less than the laboratory method reporting
---	No established comparison value
bgs	below ground surface
PCE	Tetrachloroethene
Bold	Result exceeds a Comparison Value

Comparison Values:

RWQCB ESL$_{VI}$ Residential: San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for subslab/soil gas vapor intrusion human health risk levels under a residential (Residential) subslab/soil gas vapor intrusion human health risk levels under a residential (Residential)

CWRCB LTCP: Califorina State Water Resources Control Board Low-Threat Underground Storage Tank Case Closure Policy where no bioattenuation is present (Aug 2012)

APPENDIX A

PERMITS

DEPT. OF HEALTH SVCS

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

Incomplete
~~MAY 08 2018~~
ENVIRONMENTAL HEALTH & SAFETY

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment/LOP Lead

For Office Use Only
Amount Paid 643—
Receipt Number 057B . PE 1416
Payment Date 5.10.18 Rev. Code 115023
Site ID# FA0038410
Permit # SR0015435

Permit Type:

☐ Monitoring Well ■ Borings ☐ Destruct ■ Environmental Assessment

Well Type: ☐ Remediation Well ☐ Extraction Well ■ Soil Vapor
☐ Other 4 soil vapor borings to 5 feet

DEPT. OF HEALTH SVCS
MAY 10 2018
ENVIRONMENTAL HEALTH & SAFETY

On-Site Well _____ ID # _____ # Off-Site Well _____ ID # _____

On-Site Boring 4 ID # _____ # Off-Site Boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

Site Address 325 Yolanda Avenue AP# 044-071-002-000

Facility Name Hulsman Transportation Company

Site Owner Paul Hulsman Phone (707) 479-9023

Street 325 Yolanda Avenue City Santa Rosa State CA Zip 95407

Responsible Party Nate Carlson Phone ncarlson@awolff.com

Street 6710 East Camelback Road City Scottsdale State AZ Zip 85251

Consultant AEI Consultants License#/Type A HAZ Phone 925-746-6000

Street 2500 Camino Diablo City Walnut Creek State CA Zip 94597

License #/Type 654919 Email tyerkes@aeiconsultants.com

Drilling Contractor Environmental Control Associates Phone 916-417-6858

Street 3011 Twin Palms Drive City Aptos State CA Zip 95003

C-57 License 695970

Disposal method for soil cuttings Drummed for offsite disposal

Disposal method for development water N/A

Drilling method Direct-push

Method of drill equipment rinsate containment and disposal Drummed for offsite disposal

If destroying a well, abandonment method N/A

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leach field? ○Yes ◉No
50 feet of any sanitary sewer line? ○Yes ◉No
25 feet of any private sanitary sewer line? ○Yes ◉No

05/10/18

117037*#
115023D
~~DRILLING 643.00~~
TTLAMT 643.00
CHECKS 643.00
CHANGE 0.00
057B #2 13:12

In addition, all monitoring wells must include an ***identification system*** affixed to the interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

ENTERED
EP

LL

For Office Use Only

Address 325 Yolanda Ave

Site ID# FA0038410

Permit # SR0015435

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Environmental Health and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by the Department of Health Services, Environmental Health and Safety Section within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

Tim Tyler Date 5/7/18

Signature of Well Driller—***no proxies (Wet Signature Required)***

Insurance Carrier State Fund, Policy No. 1972096-18 Expiration Date 5/1/18

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

1. Provide 48 hours advance notice of drilling.
2. Soil vapor wells shall be constructed and decommissioned in accordance with DTSC's Advisory- Active Soil Gas Investigations (2015).
3. Provide a final report with sample results and boring logs to this department within 90 days of work completion.

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by Lisa Lamb Date 5/23/18

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB/LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

APPENDIX B

BORING LOGS

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-1A

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-1A-0.5 SB-1A-2				SILTY SAND (SM) very dark grayish brown (2.5Y 3/2) medium dense, moist	
2.0					Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHII\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-1B

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-1B-0.5 SB-1B-2				CLAY (CH) very dark grayish brown (2.5Y 3/2) stiff, moist, high plasticity	
2.0					Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHII\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-1C

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-1C-0.5 SB-1C-2				CLAY (CL) very dark grayish brown (2.5Y 3/2) medium stiff, moist, medium plasticity 2.0	

Bottom of borehole at 2.0 feet.

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-1D

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-1D-0.5 SB-1D-2				SILTY SANDY GRAVEL (GM) loose, dry, fine to coarse gravel 2.0	

Bottom of borehole at 2.0 feet.

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-2A

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-2A-0.5 SB-2A-2				SILT (ML) very dark grayish brown (10YR 3/2) soft, moist 1.0 CLAY (CL) very dark grayish brown (10YR 3/2) stiff, moist, medium plasticity 2.0 Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHI\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-2B

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-2B-0.5				SILT (ML) very dark grayish brown (10YR 3/2) soft, moist	
1.0	SB-2B-2				CLAY (CL) trace sand, very dark grayish brown (10YR 3/2), stiff, moist, medium plasticity	
2.0					Bottom of borehole at 2.0 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-2C

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-2C-0.5				SILT (ML), trace fine gravel, brown (10YR 4/4), soft, dry	
	SB-2C-2			1.0	SILTY CLAY (CL) brown (10YR 4/4) stiff, moist, medium plasticity	
				2.0	Bottom of borehole at 2.0 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-2D

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-2D-0.5 SB-2D-2				SILT (ML), some fine sand, dark yellowish brown (10YR 3/4), loose, dry	
2.0					Bottom of borehole at 2.0 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-3A

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-3A-0.5 SB-3A-2				SANDY SILT (ML), with fine gravel, dark brown (10YR 3/3), soft, moist	
2.0					Bottom of borehole at 2.0 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-3B

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-3B-0.5				SILT (ML) very dark grayish brown (10YR 3/2) soft, moist	
	SB-3B-2			1.0	CLAY (CL) very dark grayish brown (10YR 3/2) stiff, moist, medium plasticity	
				2.0	Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHII\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-3C

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-3C-0.5				SILT (ML) trace coarse sand, dark brown (10YR 3/3), soft, moist	
1.0	SB-3C-2				CLAY (CL) brown (10YR 4/3) soft, moist, moist, high plasticity	
2.0					Bottom of borehole at 2.0 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-3D

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-3D-0.5 SB-3D-2				CLAY (CL) brown (10YR 4/4) medium stiff, moist, medium plasticity	
2.0					Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHII\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-4A

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-4A-0.5 SB-4A-2				SILTY SAND (SM) dark yellowish brown (10YR 4/4) soft, moist, fine to medium sand	
2.0					Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHII\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-4B

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-4B-0.5 SB-4B-2				SILTY SAND (SM) dark yellowish brown (10YR 4/4) soft, moist, fine to medium sand (1.0) CLAY (CL) dark yellowish brown (10YR 4/4) soft, moist, high plasticity (2.0) Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHI\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-4C

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-4C-0.5 SB-4C-2				SILTY SAND (SM), some clay, very dark grayish brown (10YR 3/2), soft, moist, fine to coarse sand	
2.0					Bottom of borehole at 2.0 feet.	

AEI BORING - GINT STD US LAB.GDT - 5/31/18 11:29 - P:\COMPANYWIDE PROJECTS\387000 SERIES\387046 SANTA ROSA, CA\PHII\DELIVERABLES\BORING LOGS 387046.GPJ

AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-4D

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-4D-0.5 SB-4D-2				SILTY SAND (SM) very dark grayish brown (10YR 3/2) soft, moist, fine to coarse sand	
2.0					Bottom of borehole at 2.0 feet.	

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3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-5A

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-4B-0.5 SB-4B-2				SILT (ML), trace coarse sand, dark brown (10YR 3/3) soft, moist 2.0	

Bottom of borehole at 2.0 feet.

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3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-5B

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-5B-0.5 SB-5B-2				SILT (ML) trace fine gravel, brown (10YR 4/3), soft, dry 2.0	

Bottom of borehole at 2.0 feet.

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SB-5C

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-5C-0.5 SB-5C-2				SILT (ML) trace coarse sand, brown (10YR 3/3), soft, moist 2.0	

Bottom of borehole at 2.0 feet.

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Telephone: 408-559-7600
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BORING NUMBER SB-5D

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0	SB-5D-0.5 SB-5D-2				SILT (ML) trace coarse sand, brown (10YR 3/3), soft, moist 2.0	

Bottom of borehole at 2.0 feet.

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SV-1

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					CLAY (CL) dark gray (2.5Y 4/1) medium stiff, moist, medium plasticity	
3.0					SILT (ML) light yellowish brown (2.5YR 6/4) medium stiff, moist	
5	SV-1-5					
5.5					Bottom of borehole at 5.5 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
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Fax: 408-559-7600

BORING NUMBER SV-2

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					CLAY (CL) very dark grayish brown (2.5Y 3/2) medium stiff, moist, medium plasticity	
3.0					SILT (ML) light yellowish brown (2.5Y 6/4) medium stiff, moist	
5	SV-2-5					
5.5					Bottom of borehole at 5.5 feet.	

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SV-3

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					CLAYEY SILT (ML) dark grayish brown (10YR 4/2) medium stiff, moist, low plasticity	
					3.0	
					CLAY (CL) dark olive brown (2.5Y 3/3) medium stiff, moist, medium plasticity	
					4.0	
5	SV-3-5				SILT (ML) light yellowish brown (2.5Y 6/4) medium stiff, moist	
					5.5	

Bottom of borehole at 5.5 feet.

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AEI Consultants
3880 S. Bascom Avenue, Suite 109
San Jose, California 95124
Telephone: 408-559-7600
Fax: 408-559-7600

BORING NUMBER SV-4

CLIENT Wolf Enterprises II, LLC
PROJECT NAME Wolf Enterprises II, LLC
PROJECT NUMBER 387046
PROJECT LOCATION Santa Rosa, California
DATE STARTED 5/25/18 **COMPLETED** 5/25/18
GROUND ELEVATION _____ **HOLE SIZE** 2.25 inches
DRILLING CONTRACTOR Environmental Control Associates, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY T. Yerkes **CHECKED BY** J. Day
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					CLAY (CL) very dark grayish brown (2.5Y 3/2) medium stiff, moist, medium plasticity	
3.0					SILT (ML) light yellowish brown (2.5Y 6/4) medium stiff, moist	
5	SV-4-5					
5.5					Bottom of borehole at 5.5 feet.	

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APPENDIX C

LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

June 05, 2018

AEI Consultants - CA

Sample Delivery Group:	L997491
Samples Received:	05/26/2018
Project Number:	387046
Description:	Yolanda Ave.

Report To: Jacqueline Day
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

COMP-1 L997491-01 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 00:00 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118298	1	06/01/18 10:44	06/01/18 10:59	KS
Pesticides (GC) by Method 8081	WG1118336	1	06/02/18 14:22	06/03/18 18:12	VKS

COMP-2 L997491-02 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 00:00 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118298	1	06/01/18 10:44	06/01/18 10:59	KS
Pesticides (GC) by Method 8081	WG1118336	1	06/02/18 14:22	06/03/18 17:43	VKS

COMP-3 L997491-03 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 00:00 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118298	1	06/01/18 10:44	06/01/18 10:59	KS
Pesticides (GC) by Method 8081	WG1118336	1	06/02/18 14:22	06/03/18 15:45	VKS

COMP-4 L997491-04 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 00:00 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118298	1	06/01/18 10:44	06/01/18 10:59	KS
Pesticides (GC) by Method 8081	WG1118336	1	06/02/18 14:22	06/03/18 18:27	VKS

COMP-5 L997491-05 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 00:00 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	KS
Pesticides (GC) by Method 8081	WG1118336	1	06/02/18 14:22	06/03/18 16:44	VKS
Pesticides (GC) by Method 8081	WG1118336	2	06/02/18 14:22	06/05/18 14:18	VKS

SB-1D 0.5 L997491-06 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 09:05 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	KS
Metals (ICP) by Method 6010B	WG1117905	1	05/31/18 12:59	06/01/18 14:54	RDS

SB-2D 0.5 L997491-07 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 09:19 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	KS
Metals (ICP) by Method 6010B	WG1117905	1	05/31/18 12:59	06/01/18 14:57	RDS

SB-3D 0.5 L997491-08 Solid

			Collected by	Collected date/time	Received date/time
			Tamara Yerkes	05/25/18 09:31	05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	KS
Metals (ICP) by Method 6010B	WG1117905	1	05/31/18 12:59	06/01/18 15:07	TRB

SB-4D 0.5 L997491-09 Solid

			Collected by	Collected date/time	Received date/time
			Tamara Yerkes	05/25/18 11:12	05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	KS
Metals (ICP) by Method 6010B	WG1117905	1	05/31/18 12:59	06/01/18 15:10	TRB

SB-5D 0.5 L997491-10 Solid

			Collected by	Collected date/time	Received date/time
			Tamara Yerkes	05/25/18 11:46	05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	KS
Metals (ICP) by Method 6010B	WG1117905	1	05/31/18 12:59	06/01/18 15:14	TRB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.6		1	06/01/2018 10:59	WG1118298

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000252	0.0216	1	06/03/2018 18:12	WG1118336
Alpha BHC	U		0.000208	0.0216	1	06/03/2018 18:12	WG1118336
Beta BHC	U		0.000327	0.0216	1	06/03/2018 18:12	WG1118336
Delta BHC	U		0.000163	0.0216	1	06/03/2018 18:12	WG1118336
Gamma BHC	U		0.000265	0.0216	1	06/03/2018 18:12	WG1118336
4,4-DDD	U		0.000177	0.0216	1	06/03/2018 18:12	WG1118336
4,4-DDE	U		0.000178	0.0216	1	06/03/2018 18:12	WG1118336
4,4-DDT	0.00116	J	0.000287	0.0216	1	06/03/2018 18:12	WG1118336
Dieldrin	U		0.0000961	0.00216	1	06/03/2018 18:12	WG1118336
Endosulfan I	U		0.000231	0.0216	1	06/03/2018 18:12	WG1118336
Endosulfan II	U		0.000248	0.0216	1	06/03/2018 18:12	WG1118336
Endosulfan sulfate	U		0.000184	0.0216	1	06/03/2018 18:12	WG1118336
Endrin	U		0.000237	0.0216	1	06/03/2018 18:12	WG1118336
Endrin aldehyde	U		0.000261	0.0216	1	06/03/2018 18:12	WG1118336
Endrin ketone	U		0.000172	0.0216	1	06/03/2018 18:12	WG1118336
Heptachlor	U		0.000109	0.0216	1	06/03/2018 18:12	WG1118336
Heptachlor epoxide	U		0.000408	0.0216	1	06/03/2018 18:12	WG1118336
Hexachlorobenzene	U		0.000242	0.0216	1	06/03/2018 18:12	WG1118336
Methoxychlor	U		0.000286	0.0216	1	06/03/2018 18:12	WG1118336
Chlordane	U		0.0421	0.216	1	06/03/2018 18:12	WG1118336
Toxaphene	U		0.0389	0.432	1	06/03/2018 18:12	WG1118336
(S) Decachlorobiphenyl	*61.7*			*10.0-148*		*06/03/2018 18:12*	WG1118336
(S) Tetrachloro-m-xylene	*71.4*			*21.0-146*		*06/03/2018 18:12*	WG1118336

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.3		1	06/01/2018 10:59	WG1118298

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000255	0.0219	1	06/03/2018 17:43	WG1118336
Alpha BHC	U		0.000211	0.0219	1	06/03/2018 17:43	WG1118336
Beta BHC	U		0.000332	0.0219	1	06/03/2018 17:43	WG1118336
Delta BHC	U		0.000165	0.0219	1	06/03/2018 17:43	WG1118336
Gamma BHC	U		0.000268	0.0219	1	06/03/2018 17:43	WG1118336
4,4-DDD	U		0.000180	0.0219	1	06/03/2018 17:43	WG1118336
4,4-DDE	U		0.000181	0.0219	1	06/03/2018 17:43	WG1118336
4,4-DDT	U		0.000291	0.0219	1	06/03/2018 17:43	WG1118336
Dieldrin	U		0.0000975	0.00219	1	06/03/2018 17:43	WG1118336
Endosulfan I	U		0.000234	0.0219	1	06/03/2018 17:43	WG1118336
Endosulfan II	U		0.000252	0.0219	1	06/03/2018 17:43	WG1118336
Endosulfan sulfate	U		0.000186	0.0219	1	06/03/2018 17:43	WG1118336
Endrin	U		0.000240	0.0219	1	06/03/2018 17:43	WG1118336
Endrin aldehyde	U		0.000265	0.0219	1	06/03/2018 17:43	WG1118336
Endrin ketone	U		0.000174	0.0219	1	06/03/2018 17:43	WG1118336
Heptachlor	U		0.000111	0.0219	1	06/03/2018 17:43	WG1118336
Heptachlor epoxide	U		0.000414	0.0219	1	06/03/2018 17:43	WG1118336
Hexachlorobenzene	U		0.000245	0.0219	1	06/03/2018 17:43	WG1118336
Methoxychlor	U		0.000290	0.0219	1	06/03/2018 17:43	WG1118336
Chlordane	U		0.0427	0.219	1	06/03/2018 17:43	WG1118336
Toxaphene	U		0.0394	0.438	1	06/03/2018 17:43	WG1118336
(S) Decachlorobiphenyl	*64.1*			*10.0-148*		*06/03/2018 17:43*	WG1118336
(S) Tetrachloro-m-xylene	*73.6*			*21.0-146*		*06/03/2018 17:43*	WG1118336

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.8		1	06/01/2018 10:59	WG1118298

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000260	0.0223	1	06/03/2018 15:45	WG1118336
Alpha BHC	U		0.000215	0.0223	1	06/03/2018 15:45	WG1118336
Beta BHC	U		0.000338	0.0223	1	06/03/2018 15:45	WG1118336
Delta BHC	U		0.000168	0.0223	1	06/03/2018 15:45	WG1118336
Gamma BHC	U		0.000273	0.0223	1	06/03/2018 15:45	WG1118336
4,4-DDD	U		0.000183	0.0223	1	06/03/2018 15:45	WG1118336
4,4-DDE	U		0.000184	0.0223	1	06/03/2018 15:45	WG1118336
4,4-DDT	U		0.000296	0.0223	1	06/03/2018 15:45	WG1118336
Dieldrin	U		0.0000991	0.00223	1	06/03/2018 15:45	WG1118336
Endosulfan I	U		0.000238	0.0223	1	06/03/2018 15:45	WG1118336
Endosulfan II	U		0.000256	0.0223	1	06/03/2018 15:45	WG1118336
Endosulfan sulfate	U		0.000189	0.0223	1	06/03/2018 15:45	WG1118336
Endrin	U		0.000244	0.0223	1	06/03/2018 15:45	WG1118336
Endrin aldehyde	U		0.000270	0.0223	1	06/03/2018 15:45	WG1118336
Endrin ketone	U		0.000177	0.0223	1	06/03/2018 15:45	WG1118336
Heptachlor	U		0.000113	0.0223	1	06/03/2018 15:45	WG1118336
Heptachlor epoxide	U		0.000421	0.0223	1	06/03/2018 15:45	WG1118336
Hexachlorobenzene	U		0.000250	0.0223	1	06/03/2018 15:45	WG1118336
Methoxychlor	U		0.000295	0.0223	1	06/03/2018 15:45	WG1118336
Chlordane	U		0.0434	0.223	1	06/03/2018 15:45	WG1118336
Toxaphene	U		0.0401	0.446	1	06/03/2018 15:45	WG1118336
(S) Decachlorobiphenyl	*69.8*			*10.0-148*		*06/03/2018 15:45*	WG1118336
(S) Tetrachloro-m-xylene	*70.3*			*21.0-146*		*06/03/2018 15:45*	WG1118336

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	06/01/2018 10:59	WG1118298

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000253	0.0217	1	06/03/2018 18:27	WG1118336
Alpha BHC	U		0.000209	0.0217	1	06/03/2018 18:27	WG1118336
Beta BHC	U		0.000328	0.0217	1	06/03/2018 18:27	WG1118336
Delta BHC	U		0.000164	0.0217	1	06/03/2018 18:27	WG1118336
Gamma BHC	U		0.000266	0.0217	1	06/03/2018 18:27	WG1118336
4,4-DDD	U		0.000178	0.0217	1	06/03/2018 18:27	WG1118336
4,4-DDE	0.00125	J P	0.000179	0.0217	1	06/03/2018 18:27	WG1118336
4,4-DDT	0.00153	J	0.000288	0.0217	1	06/03/2018 18:27	WG1118336
Dieldrin	U		0.0000965	0.00217	1	06/03/2018 18:27	WG1118336
Endosulfan I	U		0.000232	0.0217	1	06/03/2018 18:27	WG1118336
Endosulfan II	U		0.000249	0.0217	1	06/03/2018 18:27	WG1118336
Endosulfan sulfate	U		0.000184	0.0217	1	06/03/2018 18:27	WG1118336
Endrin	U		0.000237	0.0217	1	06/03/2018 18:27	WG1118336
Endrin aldehyde	U		0.000262	0.0217	1	06/03/2018 18:27	WG1118336
Endrin ketone	U		0.000172	0.0217	1	06/03/2018 18:27	WG1118336
Heptachlor	U		0.000109	0.0217	1	06/03/2018 18:27	WG1118336
Heptachlor epoxide	U		0.000410	0.0217	1	06/03/2018 18:27	WG1118336
Hexachlorobenzene	U		0.000243	0.0217	1	06/03/2018 18:27	WG1118336
Methoxychlor	U		0.000287	0.0217	1	06/03/2018 18:27	WG1118336
Chlordane	U		0.0423	0.217	1	06/03/2018 18:27	WG1118336
Toxaphene	U		0.0390	0.434	1	06/03/2018 18:27	WG1118336
(S) Decachlorobiphenyl	*70.9*			*10.0-148*		*06/03/2018 18:27*	WG1118336
(S) Tetrachloro-m-xylene	*79.5*			*21.0-146*		*06/03/2018 18:27*	WG1118336

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.6		1	06/01/2018 09:08	WG1118299

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000249	0.0214	1	06/03/2018 16:44	WG1118336
Alpha BHC	U		0.000206	0.0214	1	06/03/2018 16:44	WG1118336
Beta BHC	U		0.000324	0.0214	1	06/03/2018 16:44	WG1118336
Delta BHC	U		0.000161	0.0214	1	06/03/2018 16:44	WG1118336
Gamma BHC	U		0.000262	0.0214	1	06/03/2018 16:44	WG1118336
4,4-DDD	U		0.000175	0.0214	1	06/03/2018 16:44	WG1118336
4,4-DDE	U		0.000176	0.0214	1	06/03/2018 16:44	WG1118336
4,4-DDT	0.0104	J	0.000284	0.0214	1	06/03/2018 16:44	WG1118336
Dieldrin	U		0.0000951	0.00214	1	06/03/2018 16:44	WG1118336
Endosulfan I	U		0.000229	0.0214	1	06/03/2018 16:44	WG1118336
Endosulfan II	U		0.000246	0.0214	1	06/03/2018 16:44	WG1118336
Endosulfan sulfate	U		0.000182	0.0214	1	06/03/2018 16:44	WG1118336
Endrin	U		0.000234	0.0214	1	06/03/2018 16:44	WG1118336
Endrin aldehyde	U		0.000258	0.0214	1	06/03/2018 16:44	WG1118336
Endrin ketone	U		0.000170	0.0214	1	06/03/2018 16:44	WG1118336
Heptachlor	U		0.000108	0.0214	1	06/03/2018 16:44	WG1118336
Heptachlor epoxide	U		0.000404	0.0214	1	06/03/2018 16:44	WG1118336
Hexachlorobenzene	U		0.000239	0.0214	1	06/03/2018 16:44	WG1118336
Methoxychlor	U		0.000283	0.0214	1	06/03/2018 16:44	WG1118336
Chlordane	1.79		0.0833	0.427	2	06/05/2018 14:18	WG1118336
Toxaphene	U		0.0385	0.427	1	06/03/2018 16:44	WG1118336
(S) Decachlorobiphenyl	*109*			*10.0-148*		*06/03/2018 16:44*	WG1118336
(S) Decachlorobiphenyl	*89.8*			*10.0-148*		*06/05/2018 14:18*	WG1118336
(S) Tetrachloro-m-xylene	*94.4*			*21.0-146*		*06/03/2018 16:44*	WG1118336
(S) Tetrachloro-m-xylene	*66.8*			*21.0-146*		*06/05/2018 14:18*	WG1118336

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.5		1	06/01/2018 09:08	WG1118299

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	1.97	J	0.734	2.26	1	06/01/2018 14:54	WG1117905
Lead	6.83		0.215	0.565	1	06/01/2018 14:54	WG1117905

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	06/01/2018 09:08	WG1118299

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	1.26	J	0.688	2.12	1	06/01/2018 14:57	WG1117905
Lead	18.2		0.201	0.529	1	06/01/2018 14:57	WG1117905

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	06/01/2018 09:08	WG1118299

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	5.04		0.771	2.37	1	06/01/2018 15:07	WG1117905
Lead	6.97		0.225	0.593	1	06/01/2018 15:07	WG1117905

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	06/01/2018 09:08	WG1118299

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	6.43		0.709	2.18	1	06/01/2018 15:10	WG1117905
Lead	38.2		0.207	0.546	1	06/01/2018 15:10	WG1117905

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.1		1	06/01/2018 09:08	WG1118299

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	2.95		0.698	2.15	1	06/01/2018 15:14	WG1117905
Lead	37.3		0.204	0.537	1	06/01/2018 15:14	WG1117905

Method Blank (MB)

(MB) R3315079-1 06/01/18 10:59

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L997354-01 Original Sample (OS) • Duplicate (DUP)

(OS) L997354-01 06/01/18 10:59 • (DUP) R3315079-3 06/01/18 10:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.3	86.9	1	1.60		5

Laboratory Control Sample (LCS)

(LCS) R3315079-2 06/01/18 10:59

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3315064-1 06/01/18 09:08

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L997491-07 Original Sample (OS) • Duplicate (DUP)

(OS) L997491-07 06/01/18 09:08 • (DUP) R3315064-3 06/01/18 09:08

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.5	94.5	1	0.00191		5

Laboratory Control Sample (LCS)

(LCS) R3315064-2 06/01/18 09:08

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3314764-1 06/01/18 14:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Lead	U		0.190	0.500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314764-2 06/01/18 14:31 • (LCSD) R3314764-3 06/01/18 14:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	97.1	96.1	97.1	96.1	80.0-120			0.972	20
Lead	100	101	100	101	100	80.0-120			0.642	20

L997787-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L997787-01 06/01/18 14:37 • (MS) R3314764-6 06/01/18 14:47 • (MSD) R3314764-7 06/01/18 14:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	7.55	94.5	98.3	87.0	90.7	1	75.0-125			3.91	20
Lead	100	9.32	109	114	99.3	104	1	75.0-125			4.56	20

Method Blank (MB)

(MB) R3315199-3 06/03/18 12:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.000233	0.0200
Alpha BHC	U		0.000193	0.0200
Beta BHC	U		0.000303	0.0200
Delta BHC	U		0.000151	0.0200
Gamma BHC	U		0.000245	0.0200
4,4-DDD	U		0.000164	0.0200
4,4-DDE	U		0.000165	0.0200
4,4-DDT	U		0.000266	0.0200
Dieldrin	U		0.0000890	0.00200
Endosulfan I	U		0.000214	0.0200
Endosulfan II	U		0.000230	0.0200
Endosulfan sulfate	U		0.000170	0.0200
Endrin	U		0.000219	0.0200
Endrin aldehyde	U		0.000242	0.0200
Endrin ketone	U		0.000159	0.0200
Heptachlor	U		0.000101	0.0200
Heptachlor epoxide	U		0.000378	0.0200
Hexachlorobenzene	U		0.000224	0.0200
Methoxychlor	U		0.000265	0.0200
Chlordane	U		0.0390	0.200
Toxaphene	U		0.0360	0.400
(S) Decachlorobiphenyl	*63.4*			*10.0-148*
(S) Tetrachloro-m-xylene	*79.1*			*21.0-146*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3315199-1 06/03/18 12:05 • (LCSD) R3315199-2 06/03/18 12:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0667	0.0384	0.0390	57.6	58.5	55.0-137			1.50	29
Alpha BHC	0.0667	0.0393	0.0400	59.0	60.0	55.0-136			1.78	28
Beta BHC	0.0667	0.0385	0.0397	57.8	59.5	53.0-133			3.05	28
Delta BHC	0.0667	0.0411	0.0422	61.6	63.3	53.0-139			2.69	29
Gamma BHC	0.0667	0.0423	0.0436	63.4	65.3	54.0-136			2.96	29
4,4-DDD	0.0667	0.0403	0.0408	60.5	61.1	51.0-141			1.06	29
4,4-DDE	0.0667	0.0382	0.0384	57.2	57.6	53.0-142			0.585	30
4,4-DDT	0.0667	0.0464	0.0471	69.6	70.6	47.0-143			1.42	30
Dieldrin	0.0667	0.0397	0.0401	59.6	60.1	54.0-141			0.947	29
Endosulfan I	0.0667	0.0381	0.0384	57.1	57.6	54.0-141			0.816	29

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3315199-1 06/03/18 12:05 • (LCSD) R3315199-2 06/03/18 12:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Endosulfan II	0.0667	0.0371	0.0375	55.6	56.2	53.0-140			1.07	28
Endosulfan sulfate	0.0667	0.0381	0.0386	57.2	57.9	52.0-141			1.20	29
Endrin	0.0667	0.0418	0.0420	62.6	62.9	52.0-137			0.475	29
Endrin aldehyde	0.0667	0.0337	0.0348	50.5	52.2	30.0-127			3.40	31
Endrin ketone	0.0667	0.0395	0.0402	59.3	60.3	51.0-139			1.77	28
Heptachlor	0.0667	0.0463	0.0471	69.4	70.6	53.0-144			1.82	29
Heptachlor epoxide	0.0667	0.0401	0.0407	60.1	60.9	54.0-137			1.41	28
Hexachlorobenzene	0.0667	0.0401	0.0407	60.1	61.0	50.0-135			1.36	28
Methoxychlor	0.0667	0.0447	0.0451	67.0	67.7	49.0-145			1.07	29
(S) Decachlorobiphenyl				*49.9*	*57.9*	*10.0-148*				
(S) Tetrachloro-m-xylene				*58.9*	*68.8*	*21.0-146*				

L997301-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L997301-01 06/03/18 16:59 • (MS) R3315443-2 06/03/18 17:14 • (MSD) R3315443-3 06/03/18 17:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0773	ND	0.0433	0.0463	56.1	59.9	1	19.0-152			6.60	24
Alpha BHC	0.0773	ND	0.0443	0.0484	57.3	62.7	1	39.0-152			8.91	21
Beta BHC	0.0773	ND	0.0445	0.0475	57.6	61.4	1	38.0-150			6.35	20
Delta BHC	0.0773	ND	0.0410	0.0443	53.0	57.3	1	34.0-155			7.77	21
Gamma BHC	0.0773	ND	0.0433	0.0466	56.0	60.4	1	38.0-153			7.50	21
4,4-DDD	0.0773	ND	0.0433	0.0446	56.1	57.7	1	22.0-160			2.82	25
4,4-DDE	0.0773	ND	0.0487	0.0493	56.9	57.8	1	10.0-160			1.34	27
4,4-DDT	0.0773	ND	0.0520	0.0499	60.5	57.9	1	10.0-160			3.96	28
Dieldrin	0.0773	ND	0.0488	0.0482	63.1	62.3	1	30.0-158			1.22	25
Endosulfan I	0.0773	ND	0.0428	0.0447	55.4	57.8	1	31.0-155			4.22	25
Endosulfan II	0.0773	ND	0.0418	0.0427	54.1	55.2	1	32.0-156			2.11	25
Endosulfan sulfate	0.0773	ND	0.0404	0.0422	52.3	54.7	1	31.0-158			4.52	24
Endrin	0.0773	ND	0.0452	0.0472	58.4	61.1	1	30.0-149			4.51	25
Endrin aldehyde	0.0773	ND	0.0391	0.0397	50.6	51.4	1	20.0-157			1.55	26
Endrin ketone	0.0773	ND	0.0428	0.0446	55.4	57.7	1	32.0-154			3.95	23
Heptachlor	0.0773	ND	0.0457	0.0497	59.2	64.3	1	18.0-160			8.37	23
Heptachlor epoxide	0.0773	ND	0.0448	0.0462	57.9	59.8	1	31.0-154			3.21	25
Hexachlorobenzene	0.0773	ND	0.0422	0.0459	54.6	59.4	1	26.0-146			8.31	21
Methoxychlor	0.0773	ND	0.0518	0.0537	67.1	69.5	1	10.0-160			3.55	27
(S) Decachlorobiphenyl					*62.4*	*66.8*		*10.0-148*				
(S) Tetrachloro-m-xylene					*59.4*	*69.8*		*21.0-146*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P	RPD between the primary and confirmatory analysis exceeded 40%.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

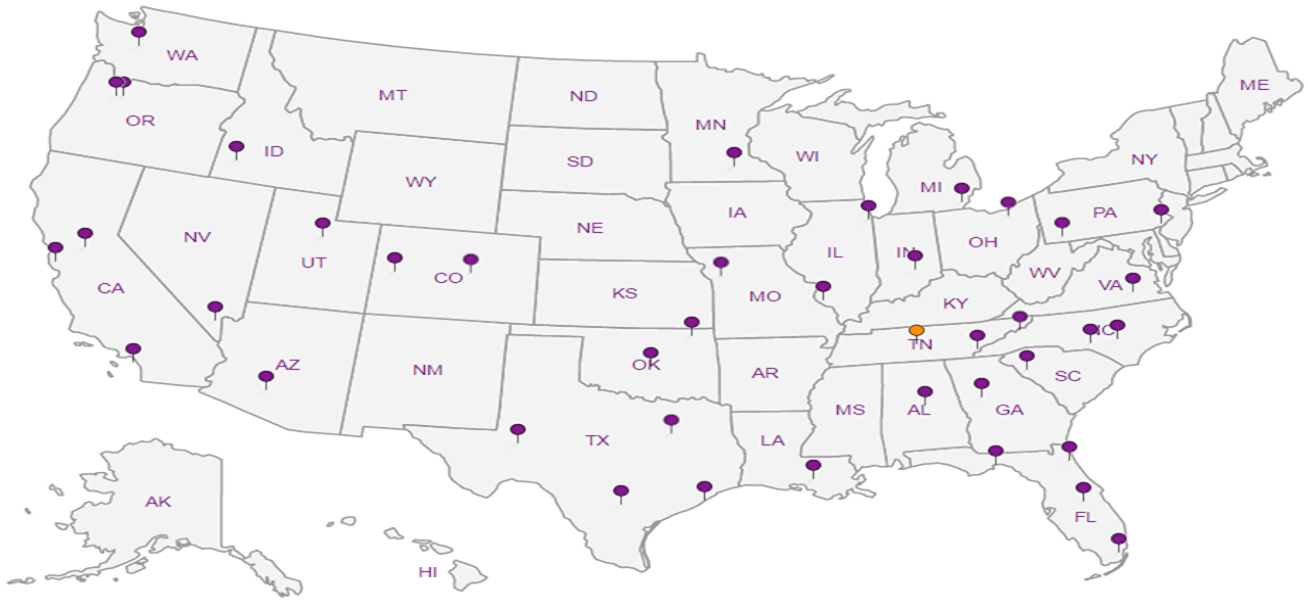
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:

Accounts Payable - Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Report to: **Jacqueline Day**

Email To: **jday@aeiconsultants.com,** tyorkes@aeiconsultants.com

Project Description:

City/State Collected:

Phone: **925-746-6000**
Fax:

Client Project # **387046**

Lab Project # **AEICONWCCA-387046**

Collected by (print): Tamera Yorkes

Site/Facility ID #

P.O. # **160638**

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 5

ESC LAB SCIENCES
A subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 497491

Table G161

Acctnum: **AEICONWCCA**
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	OC Pesticides by EPA 8081A	Arsenic by EPA 6010B	Lead by EPA 6010B	Remarks	Sample # (lab only)
SB-1A	Comp	SS	0.5	2/25/18	851	1	X				-01
SB-1A		SS	~~1.5~~ 2.0	2/25/18	853	1					-01
SB-1B	Comp	SS	0.5	2/25/18	900	1	X			Hold	
SB-1B		SS	~~1.5~~ 2.0	2/25/18	901	1					-02 -01
SB-1C	Comp	SS	0.5	2/25/18	825	1	X			Hold	
SB-1C		SS	~~1.5~~ 2.0	2/25/18	827	1					-03 -01
SB-1D	Comp/Grab	SS	0.5	2/25/18	905	1	X	X	X	Hold	
SB-1D		SS	~~1.5~~ 2.0	2/25/18	908	1					-04 -05 -01 -06
SB-2A	Comp	SS	0.5	2/25/18	1045	1	X			Hold	
SB-2A		SS	~~1.5~~ 2.0	2/25/18	1047	1					-06 -02
										Hold	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Sample SB-1D composite for OCPs by EPA 8081A, discrete sample for arsenic and lead

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/25/18	1531	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.7 °C Bottles Received: 44

If preservation required by Login: Date/Time

Date: 5/25/18 Time: 0545

5-172

Conditions NCF / OK

AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:

Accounts Payable - Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Pres Chk

Report to: **Jacqueline Day**

Email To: **jday@aeiconsultants.com,** tyerkes@aeiconsultants.com

Project Description:

City/State Collected:

Phone: **925-746-6000**
Fax:

Client Project # **387046**

Lab Project # **AEICONWCCA-387046**

Collected by (print): Tamara Yerkes

Site/Facility ID #

P.O. # **160638**

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	OC Pesticides by EPA 8081A	Arsenic by EPA 6010B	Lead by EPA 6010B	Remarks	Sample # (lab only)
SB-2B	Comp	SS	0.5	2/25/18	934	1	X				-06
SB-2B		SS	1 to 2	2/25/18	935	1				Hold	-07
SB-2C	Comp	SS	0.5	2/25/18	917	1	X				-07
SB-2C		SS	1 to 2	2/25/18	918	1				Hold	-08
SB-2D	Comp/grab	SS	0.5	2/25/18	919	1	X	X	X	-02,07	-09
SB-2D		SS	1 to 2	2/25/18	920	1				Hold	-10
SB-3A	Comp	SS	0.5	2/25/18	1034	1	X				-04
SB-3A		SS	1 to 2	2/25/18	1037	1				Hold	-11
SB-3B	Comp	SS	0.5	2/25/18	1052	1	X				20
SB-3B		SS	1 to 2	2/25/18	1054	1				Hold	-12

Chain of Custody Page ___ of ___

ESC LAB SCIENCES

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# ~~947313~~ 997491

Table #

Acctnum: **AEICONWCCA**

Template:

Prelogin:

TSR:

PB:

Shipped Via:

-03 -02 -01

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Sample SB-2D composite for OCPs by EPA 8081A, discrete sample for arsenic and lead

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/25/18	1531	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Em TT

Trip Blank Received: Yes / (No)
HCL / MeoH
TBR

Temp: 3.7 °C Bottles Received: 44

Date: 5/26/18 Time: 0845

If preservation required by Login: Date/Time

5-174

Condition: NCF / OK

AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:
Accounts Payable - Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Pres Chk

Report to: Jacqueline Day

Email To: jday@aeiconsultants.com, tyorkes@aeiconsultants.com

Project Description:

City/State Collected:

Phone: 925-746-6000
Fax:

Client Project #: 387046

Lab Project #: AEICONWCCA-387046

Collected by (print): Tamara Yorkes

Site/Facility ID #:

P.O. #: 160638

Collected by (signature): [signature]

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #:

Date Results Needed:

Immediately Packed on Ice N ___ Y X

Chain of Custody Page ___ of ___

ESC LAB SCIENCES

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# ~~L977313~~ L997491

Table #:

Acctnum: AEICONWCCA

Template:
Prelogin:
TSR:
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	OC Pesticides by EPA 8081A	Arsenic by EPA 6010B	Lead by EPA 6010B	Remarks	Sample # (lab only)
SB-3C	Comp	SS	0.5	2/25/18	1106	1	X				-01 -13-03
SB-3C		SS	2	2/25/18	1108	1				Hold	
SB-3D	comp/grab	SS	0.5	2/25/18	931	1	X	X	X	-03,07	-12 -14 15
SB-3D		SS	2	2/25/18	933	1				Hold	
SB-4A	Comp	SS	0.5	2/25/18	1001	1	X			-04	-13 16
SB-4A		SS	2	2/25/18	1003	1				Hold	
SB-4B	Comp	SS	0.5	2/25/18	1005	1	X			-04	-14 17
SB-4B		SS	2	2/25/18	1007	1				Hold	
SB-4C	Comp	SS	0.5	2/25/18	1134	1	X			-04	-15 18
SB-4C		SS	2	2/25/18	1136	1				Hold	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_______

Remarks:
Sample SB-3D composite for OCPs by EPA 8081A, discrete sample for arsenic and lead

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP _Y _N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: _Y _N
Preservation Correct/Checked: _Y _N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	
[signature]	5/25/18	1531			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7 °C Bottles Received: 44	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/26/18 Time: 0845	Hold: Condition: NCF / OK

AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:

Accounts Payable - Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Jacqueline Day**

Email To: jday@aeiconsultants.com, tyorkes@aeiconsultants.com

Project Description:

City/State Collected:

Phone: **925-746-6000**
Fax:

Client Project # **387046**

Lab Project # **AEICONWCCA-387046**

L# ~~997313~~ 997491

Table #

Collected by (print): Tamara Yerkes

Site/Facility ID #

P.O. # **160638**

Acctnum: **AEICONWCCA**

Collected by (signature): [signature]

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Template:
Prelogin:
TSR:
PB:
Shipped Via:

Immediately Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	OC Pesticides by EPA 8081A	Arsenic by EPA 6010B	Lead by EPA 6010B	Remarks	Sample # (lab only)
SB-4D	comp/grab	SS	0.5	2/25/18	1112	1	X	X	X	-04, 09	-16 19 20
SB-4D		SS	2	2/25/18	1114	1				Hold	
SB-5A	Comp	SS	0.5	2/25/18	1020	1	X			-05	-17 -20 21
SB-5A		SS	2	2/25/18	1023	1				Hold	
SB-5B	Comp	SS	0.5	2/25/18	1015	1	X			-05	-18 21 22
SB-5B		SS	2	2/25/18	1018	1				Hold	
SB-5C	Comp	SS	0.5	2/25/18	1141	1	X			-05	-19 -22 23
SB-5C		SS	2	2/25/18	1143	1				Hold	
SB-5D	comp/grab	SS	0.5	2/25/18	1146	1	X	X	X	-05, 10	24 25 -20 -23 24
SB-5D		SS	2	2/25/18	1148	1				Hold	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ________

Remarks:
Samples SB-4D and SB-5D composite for OCPs by EPA 8081A, discrete sample for arsenic and lead

pH ______ Temp ______
Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier __ ______

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP _Y _N
COC Signed/Accurate: _Y _N
Bottles arrive intact: _Y _N
Correct bottles used: _Y _N
Sufficient volume sent: _Y _N
If Applicable
VOA Zero Headspace: _Y _N
Preservation Correct/Checked: _Y _N

Relinquished by : (Signature) [signature]	Date: 5/25/18	Time: 1551	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 5.7 °C Bottles Received: 44	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 5/26/18 Time: 0845	Hold: Condition: NCF / OK

Company Name/Address:
AEI Consultants-CA
2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:
Accounts Payable-Jeremy Smith
@ Same as company Address

Report to: Jacqueline Day

Email To: jday@aeiconsultants.com
tyerkes@aeiconsultants.com

Project Description: Yolanda Ave.

City/State Collected: Santa Rosa, CA

Phone: 9257426000
Fax:

Client Project # 387046

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. # 160638

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

Analysis

Hold

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
a subsidiary of Pace

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 947913 947491

Table #

Acctnum:
Template: T136064
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Hold				Rem./Contaminant	Sample # (lab only)
SV-1-5			5/25/18	815	—	—	X					
SV-2-5				829	—	—	X					
SV-3-5				805	—	—	X					
SV-4-5				837	—	—	X					

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
	5/25/18	1531			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7 °C Bottles Received: 64	COC Seal Intact: ___Y ___N ✓NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/26/18 Time: 0845	pH Checked: / NCF:

Matthew Lockhart

ESC Lab Sciences
Non-Conformance Form

Login #:997491	Client:AEICONWCCA	Date:05/26/18	Evaluated by: Matthew Lockhart

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
X	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments:Samples past holding time client is running Sv8081CA, samples collected 02/25/18.

Client informed by:		Call		Email	x	Voice Mail		Date:05/29/18	Time:0900
TSR Initials:bjf	Client Contact: Jacqueline Day								

Login Instructions:

These were collected on 05/25/18.

Per client request:

Composite and analyze the following for SV8081CA:
COMP-1: SB-1A 0.5, SB-1B 0.5, SB-1C 0.5, SB-1D 0.5
COMP-2: SB-2A 0.5, SB-2B 0.5, SB-2C 0.5, SB-2D 0.5
COMP-3: SB-3A 0.5, SB-3B 0.5, SB-3C 0.5, SB-3D 0.5
COMP-4: SB-4A 0.5, SB-4B 0.5, SB-4C 0.5, SB-4D 0.5
COMP-5: SB-5A 0.5, SB-5B 0.5, SB-5C 0.5, SB-5D 0.5

Please cancel all analyses for
COMP SB-1D

COMP SB-2D
COMP SB-3D
COMP SB-4D
COMP SB-5D

Do not analyze any discrete samples for SV8081CA.

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

ANALYTICAL REPORT

June 05, 2018

AEI Consultants - CA

Sample Delivery Group:	L997289
Samples Received:	05/26/2018
Project Number:	387046
Description:	Yolanda Ave.

Report To: Jacqueline Day
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SV-1 L997289-01 Air

Collected by: Nina Abdollahian
Collected date/time: 05/25/18 11:36
Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1118088	1	05/31/18 15:31	05/31/18 15:31	MEL
Volatile Organic Compounds (MS) by Method TO-15	WG1118993	2	06/02/18 13:35	06/02/18 13:35	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1119592	25	06/04/18 15:29	06/04/18 15:29	MBF

SV-2 L997289-02 Air

Collected by: Nina Abdollahian
Collected date/time: 05/25/18 12:18
Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1118088	1	05/31/18 15:35	05/31/18 15:35	MEL
Volatile Organic Compounds (MS) by Method TO-15	WG1118993	2	06/02/18 14:19	06/02/18 14:19	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1119592	20	06/04/18 16:08	06/04/18 16:08	MBF

SV-3 L997289-03 Air

Collected by: Nina Abdollahian
Collected date/time: 05/25/18 10:52
Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1118088	1	05/31/18 15:38	05/31/18 15:38	MEL
Volatile Organic Compounds (MS) by Method TO-15	WG1118993	2	06/02/18 15:02	06/02/18 15:02	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1119592	20	06/04/18 16:46	06/04/18 16:46	MBF

SV-4 L997289-04 Air

Collected by: Nina Abdollahian
Collected date/time: 05/25/18 12:43
Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1118088	1	05/31/18 15:41	05/31/18 15:41	MEL
Volatile Organic Compounds (MS) by Method TO-15	WG1118993	2	06/02/18 15:46	06/02/18 15:46	MBF

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1118088

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	49.3	117		2	WG1118993
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1118993
Benzene	71-43-2	78.10	0.400	1.28	15.9	50.9		2	WG1118993
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1118993
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1118993
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1118993
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1118993
1,3-Butadiene	106-99-0	54.10	4.00	8.85	24.9	55.2		2	WG1118993
Carbon disulfide	75-15-0	76.10	0.400	1.24	6.59	20.5		2	WG1118993
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1118993
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1118993
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1118993
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1118993
Chloromethane	74-87-3	50.50	0.400	0.826	1.45	2.99		2	WG1118993
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1118993
Cyclohexane	110-82-7	84.20	0.400	1.38	19.2	66.2		2	WG1118993
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1118993
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1118993
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1118993
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1118993
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1118993
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1118993
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1118993
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1118993
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1118993
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1118993
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1118993
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1118993
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1118993
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1118993
Ethanol	64-17-5	46.10	1.26	2.38	43.5	82.0		2	WG1118993
Ethylbenzene	100-41-4	106	0.400	1.73	10.9	47.1		2	WG1118993
4-Ethyltoluene	622-96-8	120	0.400	1.96	1.69	8.31		2	WG1118993
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1118993
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG1118993
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1118993
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1118993
Heptane	142-82-5	100	0.400	1.64	12.1	49.5		2	WG1118993
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1118993
n-Hexane	110-54-3	86.20	5.00	17.6	238	841		25	WG1119592
Isopropylbenzene	98-82-8	120.20	0.400	1.97	0.400	1.97		2	WG1118993
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG1118993
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1118993
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	11.3	33.4		2	WG1118993
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1118993
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1118993
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1118993
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1118993
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1118993
Propene	115-07-1	42.10	10.0	17.2	560	964		25	WG1119592

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1118993
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1118993
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG1118993
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG1118993
Toluene	108-88-3	92.10	0.400	1.51	18.2	68.5		2	WG1118993
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1118993
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1118993
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1118993
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1118993
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	1.44	7.06		2	WG1118993
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.839	4.12		2	WG1118993
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	5.89	27.5		2	WG1118993
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1118993
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1118993
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1118993
m&p-Xylene	1330-20-7	106	0.800	3.47	43.9	190		2	WG1118993
o-Xylene	95-47-6	106	0.400	1.73	12.5	54.0		2	WG1118993
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	9.71	26.2		2	WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*112*				WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*89.8*				WG1119592

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1118088

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	38.6	91.8		2	WG1118993
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1118993
Benzene	71-43-2	78.10	0.400	1.28	12.9	41.1		2	WG1118993
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1118993
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1118993
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1118993
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1118993
1,3-Butadiene	106-99-0	54.10	4.00	8.85	7.57	16.7		2	WG1118993
Carbon disulfide	75-15-0	76.10	0.400	1.24	3.78	11.8		2	WG1118993
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1118993
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1118993
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1118993
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1118993
Chloromethane	74-87-3	50.50	0.400	0.826	1.51	3.13		2	WG1118993
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1118993
Cyclohexane	110-82-7	84.20	0.400	1.38	7.12	24.5		2	WG1118993
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1118993
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1118993
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1118993
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1118993
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1118993
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1118993
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1118993
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1118993
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1118993
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1118993
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1118993
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1118993
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1118993
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1118993
Ethanol	64-17-5	46.10	1.26	2.38	49.6	93.5		2	WG1118993
Ethylbenzene	100-41-4	106	0.400	1.73	3.90	16.9		2	WG1118993
4-Ethyltoluene	622-96-8	120	0.400	1.96	1.06	5.22		2	WG1118993
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1118993
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG1118993
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1118993
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1118993
Heptane	142-82-5	100	0.400	1.64	11.0	45.0		2	WG1118993
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1118993
n-Hexane	110-54-3	86.20	0.400	1.41	19.6	69.3		2	WG1118993
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1118993
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG1118993
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1118993
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	12.3	36.3		2	WG1118993
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1118993
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1118993
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1118993
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1118993
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1118993
Propene	115-07-1	42.10	8.00	13.8	251	433		20	WG1119592

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	0.566	2.41		2	WG1118993
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1118993
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG1118993
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG1118993
Toluene	108-88-3	92.10	0.400	1.51	31.0	117		2	WG1118993
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1118993
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1118993
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1118993
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1118993
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.837	4.11		2	WG1118993
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND		2	WG1118993
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	13.9	65.0		2	WG1118993
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1118993
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1118993
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1118993
m&p-Xylene	1330-20-7	106	0.800	3.47	12.6	54.6		2	WG1118993
o-Xylene	95-47-6	106	0.400	1.73	3.55	15.4		2	WG1118993
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	2.86	7.73		2	WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*89.2*				WG1119592

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1118088

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	60.5	144		2	WG1118993
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1118993
Benzene	71-43-2	78.10	0.400	1.28	11.7	37.4		2	WG1118993
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1118993
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1118993
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1118993
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1118993
1,3-Butadiene	106-99-0	54.10	4.00	8.85	10.7	23.7		2	WG1118993
Carbon disulfide	75-15-0	76.10	0.400	1.24	3.84	12.0		2	WG1118993
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1118993
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1118993
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1118993
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1118993
Chloromethane	74-87-3	50.50	0.400	0.826	1.13	2.33		2	WG1118993
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1118993
Cyclohexane	110-82-7	84.20	0.400	1.38	7.07	24.3		2	WG1118993
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1118993
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1118993
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1118993
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1118993
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1118993
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1118993
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1118993
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1118993
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1118993
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1118993
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1118993
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1118993
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1118993
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1118993
Ethanol	64-17-5	46.10	1.26	2.38	63.1	119		2	WG1118993
Ethylbenzene	100-41-4	106	0.400	1.73	2.99	12.9		2	WG1118993
4-Ethyltoluene	622-96-8	120	0.400	1.96	ND	ND		2	WG1118993
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1118993
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG1118993
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1118993
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1118993
Heptane	142-82-5	100	0.400	1.64	7.48	30.6		2	WG1118993
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1118993
n-Hexane	110-54-3	86.20	0.400	1.41	32.9	116		2	WG1118993
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1118993
Methylene Chloride	75-09-2	84.90	0.400	1.39	0.645	2.24		2	WG1118993
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1118993
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	12.1	35.5		2	WG1118993
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1118993
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1118993
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1118993
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1118993
2-Propanol	67-63-0	60.10	2.50	6.15	18.5	45.5		2	WG1118993
Propene	115-07-1	42.10	8.00	13.8	112	193		20	WG1119592

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	0.563	2.39		2	WG1118993
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1118993
Tetrachloroethylene	127-18-4	166	0.400	2.72	0.639	4.34		2	WG1118993
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG1118993
Toluene	108-88-3	92.10	0.400	1.51	36.5	138		2	WG1118993
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1118993
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1118993
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1118993
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1118993
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.758	3.72		2	WG1118993
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND		2	WG1118993
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	8.52	39.8		2	WG1118993
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1118993
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1118993
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1118993
m&p-Xylene	1330-20-7	106	0.800	3.47	9.45	41.0		2	WG1118993
o-Xylene	95-47-6	106	0.400	1.73	2.69	11.7		2	WG1118993
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	14.8	39.9		2	WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*88.5*				WG1119592

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1118088

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	26.2	62.3		2	WG1118993
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG1118993
Benzene	71-43-2	78.10	0.400	1.28	9.48	30.3		2	WG1118993
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG1118993
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG1118993
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG1118993
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG1118993
1,3-Butadiene	106-99-0	54.10	4.00	8.85	7.31	16.2		2	WG1118993
Carbon disulfide	75-15-0	76.10	0.400	1.24	3.96	12.3		2	WG1118993
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG1118993
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG1118993
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG1118993
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG1118993
Chloromethane	74-87-3	50.50	0.400	0.826	1.29	2.67		2	WG1118993
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG1118993
Cyclohexane	110-82-7	84.20	0.400	1.38	16.4	56.6		2	WG1118993
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG1118993
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG1118993
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG1118993
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG1118993
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG1118993
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG1118993
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG1118993
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG1118993
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG1118993
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG1118993
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG1118993
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG1118993
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG1118993
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG1118993
Ethanol	64-17-5	46.10	1.26	2.38	31.1	58.7		2	WG1118993
Ethylbenzene	100-41-4	106	0.400	1.73	1.74	7.56		2	WG1118993
4-Ethyltoluene	622-96-8	120	0.400	1.96	0.575	2.82		2	WG1118993
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG1118993
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG1118993
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG1118993
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG1118993
Heptane	142-82-5	100	0.400	1.64	6.50	26.6		2	WG1118993
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG1118993
n-Hexane	110-54-3	86.20	0.400	1.41	13.6	48.1		2	WG1118993
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1118993
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG1118993
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG1118993
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	6.09	18.0		2	WG1118993
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG1118993
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG1118993
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG1118993
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG1118993
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG1118993
Propene	115-07-1	42.10	0.800	1.38	76.1	131		2	WG1118993

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG1118993
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG1118993
Tetrachloroethylene	127-18-4	166	0.400	2.72	0.459	3.12		2	WG1118993
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG1118993
Toluene	108-88-3	92.10	0.400	1.51	15.7	59.1		2	WG1118993
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG1118993
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG1118993
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG1118993
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG1118993
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.504	2.47		2	WG1118993
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND		2	WG1118993
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	5.16	24.1		2	WG1118993
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1118993
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG1118993
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG1118993
m&p-Xylene	1330-20-7	106	0.800	3.47	5.64	24.5		2	WG1118993
o-Xylene	95-47-6	106	0.400	1.73	1.89	8.19		2	WG1118993
1,1-Difluoroethane	75-37-6	66.05	0.400	1.08	5.42	14.6		2	WG1118993
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*105*				WG1118993

Method Blank (MB)

(MB) R3314328-3 05/31/18 14:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Helium	U		0.0259	0.100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314328-1 05/31/18 14:30 • (LCSD) R3314328-2 05/31/18 14:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	%	%	%	%	%	%			%	%
Helium	2.50	2.62	2.15	105	85.9	70.0-130			19.9	25

Method Blank (MB)

(MB) R3315135-3 06/02/18 04:11

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	U		0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3315135-3 06/02/18 04:11

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	0.0984	J	0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
1,1-Difluoroethane	U		0.0256	0.200
(S) 1,4-Bromofluorobenzene	*92.9*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3315135-1 06/02/18 02:41 • (LCSD) R3315135-2 06/02/18 03:26

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	2.96	3.30	78.9	88.0	52.0-158			10.9	25
Propene	3.75	3.46	3.58	92.2	95.4	54.0-155			3.45	25
Dichlorodifluoromethane	3.75	3.53	3.65	94.0	97.3	69.0-143			3.39	25
1,2-Dichlorotetrafluoroethane	3.75	3.69	3.69	98.5	98.3	70.0-130			0.192	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3315135-1 06/02/18 02:41 • (LCSD) R3315135-2 06/02/18 03:26

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloromethane	3.75	3.50	3.59	93.4	95.8	70.0-130			2.53	25
Vinyl chloride	3.75	3.44	3.57	91.8	95.3	70.0-130			3.69	25
1,3-Butadiene	3.75	3.30	3.32	88.0	88.6	70.0-130			0.685	25
Bromomethane	3.75	3.58	3.72	95.3	99.1	70.0-130			3.89	25
Chloroethane	3.75	3.70	3.76	98.8	100	70.0-130			1.38	25
Trichlorofluoromethane	3.75	3.70	3.74	98.6	99.7	70.0-130			1.06	25
1,1,2-Trichlorotrifluoroethane	3.75	3.69	3.73	98.3	99.4	70.0-130			1.14	25
1,1-Dichloroethene	3.75	3.60	3.68	96.1	98.2	70.0-130			2.19	25
1,1-Dichloroethane	3.75	3.62	3.66	96.7	97.6	70.0-130			0.942	25
Acetone	3.75	3.53	3.56	94.3	95.0	70.0-130			0.733	25
2-Propanol	3.75	3.79	3.81	101	102	66.0-150			0.726	25
Carbon disulfide	3.75	3.62	3.68	96.5	98.0	70.0-130			1.55	25
Methylene Chloride	3.75	3.44	3.51	91.8	93.7	70.0-130			2.05	25
MTBE	3.75	3.69	3.78	98.4	101	70.0-130			2.52	25
trans-1,2-Dichloroethene	3.75	3.69	3.74	98.4	99.8	70.0-130			1.40	25
n-Hexane	3.75	3.69	3.72	98.5	99.1	70.0-130			0.588	25
Vinyl acetate	3.75	3.71	3.73	99.0	99.5	70.0-130			0.560	25
Methyl Ethyl Ketone	3.75	3.84	3.95	102	105	70.0-130			2.77	25
cis-1,2-Dichloroethene	3.75	3.73	3.76	99.6	100	70.0-130			0.632	25
Chloroform	3.75	3.67	3.71	97.8	99.0	70.0-130			1.19	25
Cyclohexane	3.75	3.75	3.80	100	101	70.0-130			1.32	25
1,1,1-Trichloroethane	3.75	3.71	3.76	99.0	100	70.0-130			1.40	25
Carbon tetrachloride	3.75	3.71	3.77	99.0	101	70.0-130			1.53	25
Benzene	3.75	3.79	3.77	101	100	70.0-130			0.669	25
1,2-Dichloroethane	3.75	3.56	3.57	95.0	95.3	70.0-130			0.343	25
Heptane	3.75	3.64	3.64	97.0	97.1	70.0-130			0.115	25
Trichloroethylene	3.75	3.72	3.70	99.2	98.7	70.0-130			0.508	25
1,2-Dichloropropane	3.75	3.66	3.66	97.5	97.6	70.0-130			0.136	25
1,4-Dioxane	3.75	3.90	3.90	104	104	70.0-152			0.128	25
Bromodichloromethane	3.75	3.71	3.71	98.9	99.0	70.0-130			0.141	25
cis-1,3-Dichloropropene	3.75	3.88	3.90	103	104	70.0-130			0.498	25
4-Methyl-2-pentanone (MIBK)	3.75	3.65	3.67	97.3	98.0	70.0-142			0.678	25
Toluene	3.75	3.77	3.72	100	99.3	70.0-130			1.19	25
trans-1,3-Dichloropropene	3.75	3.65	3.67	97.3	97.9	70.0-130			0.613	25
1,1,2-Trichloroethane	3.75	3.71	3.62	99.0	96.4	70.0-130			2.62	25
Tetrachloroethylene	3.75	3.85	3.79	103	101	70.0-130			1.82	25
Methyl Butyl Ketone	3.75	3.47	3.55	92.5	94.7	70.0-150			2.31	25
Dibromochloromethane	3.75	3.77	3.76	100	100	70.0-130			0.148	25
1,2-Dibromoethane	3.75	3.75	3.70	100	98.6	70.0-130			1.49	25
Chlorobenzene	3.75	3.64	3.67	97.0	97.9	70.0-130			0.881	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3315135-1 06/02/18 02:41 • (LCSD) R3315135-2 06/02/18 03:26

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	3.75	3.79	3.84	101	102	70.0-130			1.16	25
m&p-Xylene	7.50	7.66	7.81	102	104	70.0-130			1.99	25
o-Xylene	3.75	3.83	3.83	102	102	70.0-130			0.119	25
Styrene	3.75	4.02	4.03	107	108	70.0-130			0.312	25
Bromoform	3.75	4.11	4.11	110	110	70.0-130			0.0114	25
1,1,2,2-Tetrachloroethane	3.75	3.79	3.80	101	101	70.0-130			0.416	25
4-Ethyltoluene	3.75	3.95	3.92	105	105	70.0-130			0.701	25
1,3,5-Trimethylbenzene	3.75	3.95	3.94	105	105	70.0-130			0.215	25
1,2,4-Trimethylbenzene	3.75	3.92	3.86	104	103	70.0-130			1.48	25
1,3-Dichlorobenzene	3.75	4.08	4.12	109	110	70.0-130			1.02	25
1,4-Dichlorobenzene	3.75	4.26	4.25	114	113	70.0-130			0.213	25
Benzyl Chloride	3.75	4.32	4.22	115	113	70.0-144			2.43	25
1,2-Dichlorobenzene	3.75	4.06	4.03	108	107	70.0-130			0.871	25
1,2,4-Trichlorobenzene	3.75	4.98	5.11	133	136	70.0-155			2.52	25
Hexachloro-1,3-butadiene	3.75	4.29	4.33	114	116	70.0-145			1.00	25
Naphthalene	3.75	4.86	4.93	130	131	70.0-155			1.29	25
Allyl Chloride	3.75	3.59	3.67	95.7	97.9	70.0-130			2.33	25
2-Chlorotoluene	3.75	4.00	4.03	107	107	70.0-130			0.597	25
Methyl Methacrylate	3.75	3.63	3.68	96.8	98.2	70.0-130			1.41	25
Tetrahydrofuran	3.75	3.59	3.67	95.8	97.9	70.0-140			2.15	25
2,2,4-Trimethylpentane	3.75	3.67	3.66	97.7	97.5	70.0-130			0.277	25
Vinyl Bromide	3.75	3.78	3.82	101	102	70.0-130			1.11	25
Isopropylbenzene	3.75	3.87	3.89	103	104	70.0-130			0.376	25
1,1-Difluoroethane	3.75	3.64	3.89	97.2	104	70.0-130			6.48	25
(S) 1,4-Bromofluorobenzene				*101*	*101*	*60.0-140*				

Method Blank (MB)

(MB) R3315152-3 06/04/18 10:33

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
n-Hexane	U		0.0457	0.200
Propene	U		0.0932	0.400
(S) 1,4-Bromofluorobenzene	*90.2*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3315152-1 06/04/18 09:10 • (LCSD) R3315152-2 06/04/18 09:51

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Propene	3.75	2.68	2.82	71.5	75.2	54.0-155			5.03	25
n-Hexane	3.75	2.94	2.95	78.5	78.7	70.0-130			0.283	25
(S) 1,4-Bromofluorobenzene				*91.7*	*92.2*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

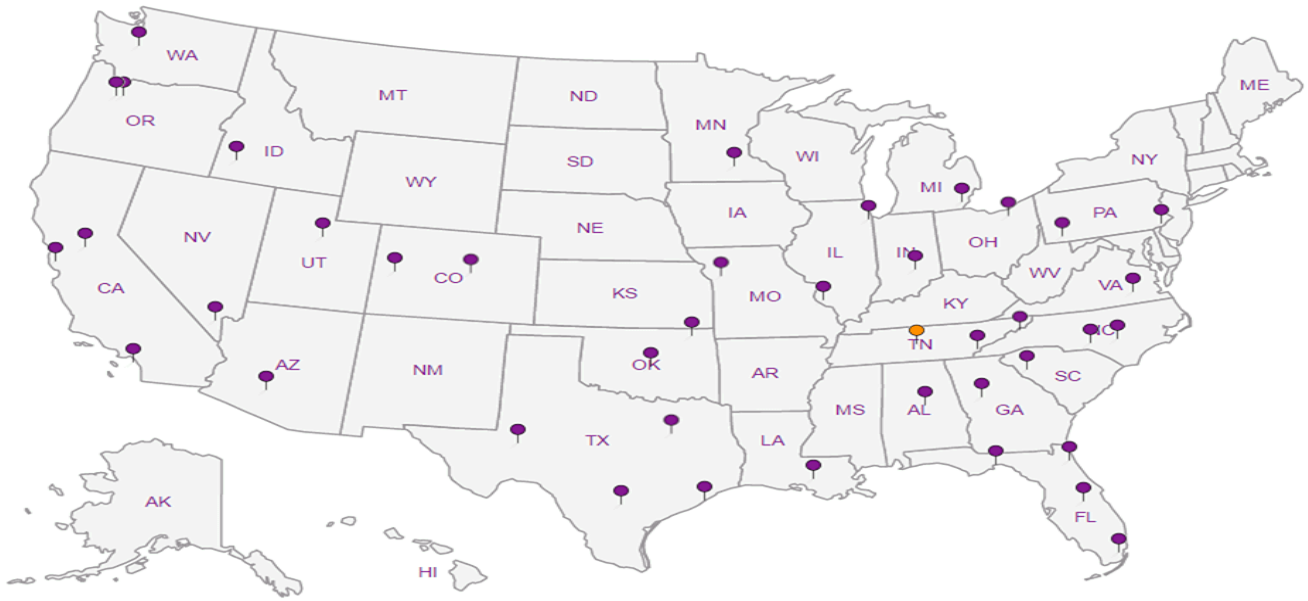
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:
Accounts Payable- Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Pres Chk

Report to: Jacqueline Day

Email To: jday@aeiconsultants.com; tyerkes@aeiconsultants.com

Project Description: [illegible] Yolanda Ave.

City/State Collected: Santa Rosa, CA

Phone: 925-746-6000
Fax:

Client Project # 37[illegible]046

Lab Project # 387046
AEICONWCCA-[illegible]

Collected by (print): Nina Abdollahian

Site/Facility ID #

P.O. # 160638

Collected by (signature):

Quote #

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

TO-15, Helium Summa

Sample ID	[illegible]	Matrix *	Canister	Date	Time	No. of Cntrs	TO-15, Helium Summa											
SV-1	30/15	Air	5205	5/25/18	1136	1	X											-01
SV-2	30/5	Air	6563	5/25/18	1218	1	X											-02
SV-3	26/5	Air	6184	5/25/18	1052	1	X											-03
SV-4	29.5/5	Air	5170	5/25/18	1243	1	X											-04
		Air	[illegible] 5/26/18			1	X	[illegible] 5/26/18										

Chain of Custody Page ___ of ___

ESC LABORATORIES
a subsidiary of [illegible]

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L997289

Table # M244

Acctnum: AEICONWCCA

Template: T136064

Prelogin: P653125

TSR: 110 - Brian Ford

PB: BF 5/10/18

Shipped Via: FedEX Ground

Remarks | Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4361 6935 7152

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: Amb °C	Bottles Received: 4
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Erin	Date: 5/26/18	Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

June 14, 2018

AEI Consultants - CA

Sample Delivery Group:	L999812
Samples Received:	05/26/2018
Project Number:	387046
Description:	

Report To: Jacqueline Day
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SB-5A 0.5 L999812-01 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 10:20 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 08:01	VKS
Pesticides (GC) by Method 8081	WG1121569	10	06/08/18 07:55	06/09/18 12:08	VKS

SB-5A 2 L999812-02 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 10:23 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 08:39	VKS

SB-5B 0.5 L999812-03 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 10:15 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 08:51	VKS

SB-5B 2 L999812-04 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 10:18 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 09:04	VKS

SB-5C 0.5 L999812-05 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 11:41 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 09:16	VKS

SB-5C 2 L999812-06 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 11:43 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 09:29	VKS

SB-5D 0.5 L999812-07 Solid

Collected by: Tamara Yerkes | Collected date/time: 05/25/18 11:46 | Received date/time: 05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1118299	1	06/01/18 08:54	06/01/18 09:08	MAS
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 09:41	VKS

SB-5D 2 L999812-08 Solid

Collected by	Collected date/time	Received date/time
Tamara Yerkes	05/25/18 11:48	05/26/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1121575	1	06/09/18 07:31	06/09/18 07:42	KDW
Pesticides (GC) by Method 8081	WG1121569	1	06/08/18 07:55	06/09/18 09:54	VKS

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000242	0.0208	1	06/09/2018 08:01	WG1121569
Alpha BHC	U		0.000200	0.0208	1	06/09/2018 08:01	WG1121569
Beta BHC	U		0.000315	0.0208	1	06/09/2018 08:01	WG1121569
Delta BHC	U		0.000157	0.0208	1	06/09/2018 08:01	WG1121569
Gamma BHC	U		0.000254	0.0208	1	06/09/2018 08:01	WG1121569
4,4-DDD	U		0.000170	0.0208	1	06/09/2018 08:01	WG1121569
4,4-DDE	U		0.000171	0.0208	1	06/09/2018 08:01	WG1121569
4,4-DDT	0.0290		0.000276	0.0208	1	06/09/2018 08:01	WG1121569
Dieldrin	U	J5	0.0000924	0.00208	1	06/09/2018 08:01	WG1121569
Endosulfan I	U		0.000222	0.0208	1	06/09/2018 08:01	WG1121569
Endosulfan II	U		0.000239	0.0208	1	06/09/2018 08:01	WG1121569
Endosulfan sulfate	U		0.000176	0.0208	1	06/09/2018 08:01	WG1121569
Endrin	U		0.000227	0.0208	1	06/09/2018 08:01	WG1121569
Endrin aldehyde	U		0.000251	0.0208	1	06/09/2018 08:01	WG1121569
Endrin ketone	U		0.000165	0.0208	1	06/09/2018 08:01	WG1121569
Heptachlor	U		0.000105	0.0208	1	06/09/2018 08:01	WG1121569
Heptachlor epoxide	U		0.000392	0.0208	1	06/09/2018 08:01	WG1121569
Hexachlorobenzene	U		0.000233	0.0208	1	06/09/2018 08:01	WG1121569
Methoxychlor	U		0.000275	0.0208	1	06/09/2018 08:01	WG1121569
Chlordane	8.70		0.405	2.08	10	06/09/2018 12:08	WG1121569
Toxaphene	U		0.0374	0.415	1	06/09/2018 08:01	WG1121569
(S) Decachlorobiphenyl	*72.4*			*10.0-148*		*06/09/2018 08:01*	WG1121569
(S) Tetrachloro-m-xylene	*78.2*			*21.0-146*		*06/09/2018 08:01*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.6		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000269	0.0231	1	06/09/2018 08:39	WG1121569
Alpha BHC	U		0.000223	0.0231	1	06/09/2018 08:39	WG1121569
Beta BHC	U		0.000350	0.0231	1	06/09/2018 08:39	WG1121569
Delta BHC	U		0.000174	0.0231	1	06/09/2018 08:39	WG1121569
Gamma BHC	U		0.000283	0.0231	1	06/09/2018 08:39	WG1121569
4,4-DDD	U		0.000189	0.0231	1	06/09/2018 08:39	WG1121569
4,4-DDE	U		0.000190	0.0231	1	06/09/2018 08:39	WG1121569
4,4-DDT	U		0.000307	0.0231	1	06/09/2018 08:39	WG1121569
Dieldrin	U		0.000103	0.00231	1	06/09/2018 08:39	WG1121569
Endosulfan I	U		0.000247	0.0231	1	06/09/2018 08:39	WG1121569
Endosulfan II	U		0.000266	0.0231	1	06/09/2018 08:39	WG1121569
Endosulfan sulfate	U		0.000196	0.0231	1	06/09/2018 08:39	WG1121569
Endrin	U		0.000253	0.0231	1	06/09/2018 08:39	WG1121569
Endrin aldehyde	U		0.000279	0.0231	1	06/09/2018 08:39	WG1121569
Endrin ketone	U		0.000184	0.0231	1	06/09/2018 08:39	WG1121569
Heptachlor	U		0.000117	0.0231	1	06/09/2018 08:39	WG1121569
Heptachlor epoxide	U		0.000436	0.0231	1	06/09/2018 08:39	WG1121569
Hexachlorobenzene	U		0.000259	0.0231	1	06/09/2018 08:39	WG1121569
Methoxychlor	U		0.000306	0.0231	1	06/09/2018 08:39	WG1121569
Chlordane	U		0.0450	0.231	1	06/09/2018 08:39	WG1121569
Toxaphene	U		0.0416	0.462	1	06/09/2018 08:39	WG1121569
(S) Decachlorobiphenyl	*42.6*			*10.0-148*		*06/09/2018 08:39*	WG1121569
(S) Tetrachloro-m-xylene	*68.5*			*21.0-146*		*06/09/2018 08:39*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.7		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000266	0.0228	1	06/09/2018 08:51	WG1121569
Alpha BHC	U		0.000220	0.0228	1	06/09/2018 08:51	WG1121569
Beta BHC	U		0.000345	0.0228	1	06/09/2018 08:51	WG1121569
Delta BHC	U		0.000172	0.0228	1	06/09/2018 08:51	WG1121569
Gamma BHC	U		0.000279	0.0228	1	06/09/2018 08:51	WG1121569
4,4-DDD	U		0.000187	0.0228	1	06/09/2018 08:51	WG1121569
4,4-DDE	U		0.000188	0.0228	1	06/09/2018 08:51	WG1121569
4,4-DDT	0.00354	J	0.000303	0.0228	1	06/09/2018 08:51	WG1121569
Dieldrin	U		0.000101	0.00228	1	06/09/2018 08:51	WG1121569
Endosulfan I	U		0.000244	0.0228	1	06/09/2018 08:51	WG1121569
Endosulfan II	U		0.000262	0.0228	1	06/09/2018 08:51	WG1121569
Endosulfan sulfate	U		0.000194	0.0228	1	06/09/2018 08:51	WG1121569
Endrin	U		0.000250	0.0228	1	06/09/2018 08:51	WG1121569
Endrin aldehyde	U		0.000276	0.0228	1	06/09/2018 08:51	WG1121569
Endrin ketone	U		0.000181	0.0228	1	06/09/2018 08:51	WG1121569
Heptachlor	U		0.000115	0.0228	1	06/09/2018 08:51	WG1121569
Heptachlor epoxide	U		0.000431	0.0228	1	06/09/2018 08:51	WG1121569
Hexachlorobenzene	U		0.000255	0.0228	1	06/09/2018 08:51	WG1121569
Methoxychlor	U		0.000302	0.0228	1	06/09/2018 08:51	WG1121569
Chlordane	0.114	J	0.0445	0.228	1	06/09/2018 08:51	WG1121569
Toxaphene	U		0.0410	0.456	1	06/09/2018 08:51	WG1121569
(S) Decachlorobiphenyl	*53.6*			*10.0-148*		*06/09/2018 08:51*	WG1121569
(S) Tetrachloro-m-xylene	*70.4*			*21.0-146*		*06/09/2018 08:51*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.3		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000273	0.0234	1	06/09/2018 09:04	WG1121569
Alpha BHC	U		0.000226	0.0234	1	06/09/2018 09:04	WG1121569
Beta BHC	U		0.000355	0.0234	1	06/09/2018 09:04	WG1121569
Delta BHC	U		0.000177	0.0234	1	06/09/2018 09:04	WG1121569
Gamma BHC	U		0.000287	0.0234	1	06/09/2018 09:04	WG1121569
4,4-DDD	U		0.000192	0.0234	1	06/09/2018 09:04	WG1121569
4,4-DDE	U		0.000193	0.0234	1	06/09/2018 09:04	WG1121569
4,4-DDT	U		0.000312	0.0234	1	06/09/2018 09:04	WG1121569
Dieldrin	U		0.000104	0.00234	1	06/09/2018 09:04	WG1121569
Endosulfan I	U		0.000251	0.0234	1	06/09/2018 09:04	WG1121569
Endosulfan II	U		0.000270	0.0234	1	06/09/2018 09:04	WG1121569
Endosulfan sulfate	U		0.000199	0.0234	1	06/09/2018 09:04	WG1121569
Endrin	U		0.000257	0.0234	1	06/09/2018 09:04	WG1121569
Endrin aldehyde	U		0.000284	0.0234	1	06/09/2018 09:04	WG1121569
Endrin ketone	U		0.000186	0.0234	1	06/09/2018 09:04	WG1121569
Heptachlor	U		0.000118	0.0234	1	06/09/2018 09:04	WG1121569
Heptachlor epoxide	U		0.000443	0.0234	1	06/09/2018 09:04	WG1121569
Hexachlorobenzene	U		0.000263	0.0234	1	06/09/2018 09:04	WG1121569
Methoxychlor	U		0.000311	0.0234	1	06/09/2018 09:04	WG1121569
Chlordane	U		0.0457	0.234	1	06/09/2018 09:04	WG1121569
Toxaphene	U		0.0422	0.469	1	06/09/2018 09:04	WG1121569
(S) Decachlorobiphenyl	*52.2*			*10.0-148*		*06/09/2018 09:04*	WG1121569
(S) Tetrachloro-m-xylene	*77.2*			*21.0-146*		*06/09/2018 09:04*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.6		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000257	0.0221	1	06/09/2018 09:16	WG1121569
Alpha BHC	U		0.000213	0.0221	1	06/09/2018 09:16	WG1121569
Beta BHC	U		0.000335	0.0221	1	06/09/2018 09:16	WG1121569
Delta BHC	U		0.000167	0.0221	1	06/09/2018 09:16	WG1121569
Gamma BHC	U		0.000271	0.0221	1	06/09/2018 09:16	WG1121569
4,4-DDD	U		0.000181	0.0221	1	06/09/2018 09:16	WG1121569
4,4-DDE	U		0.000182	0.0221	1	06/09/2018 09:16	WG1121569
4,4-DDT	0.00132	J	0.000294	0.0221	1	06/09/2018 09:16	WG1121569
Dieldrin	U		0.0000983	0.00221	1	06/09/2018 09:16	WG1121569
Endosulfan I	U		0.000236	0.0221	1	06/09/2018 09:16	WG1121569
Endosulfan II	U		0.000254	0.0221	1	06/09/2018 09:16	WG1121569
Endosulfan sulfate	U		0.000188	0.0221	1	06/09/2018 09:16	WG1121569
Endrin	U		0.000242	0.0221	1	06/09/2018 09:16	WG1121569
Endrin aldehyde	U		0.000267	0.0221	1	06/09/2018 09:16	WG1121569
Endrin ketone	U		0.000176	0.0221	1	06/09/2018 09:16	WG1121569
Heptachlor	U		0.000112	0.0221	1	06/09/2018 09:16	WG1121569
Heptachlor epoxide	U		0.000417	0.0221	1	06/09/2018 09:16	WG1121569
Hexachlorobenzene	U		0.000247	0.0221	1	06/09/2018 09:16	WG1121569
Methoxychlor	U		0.000293	0.0221	1	06/09/2018 09:16	WG1121569
Chlordane	0.116	J	0.0431	0.221	1	06/09/2018 09:16	WG1121569
Toxaphene	U		0.0397	0.442	1	06/09/2018 09:16	WG1121569
(S) Decachlorobiphenyl	*56.3*			*10.0-148*		*06/09/2018 09:16*	WG1121569
(S) Tetrachloro-m-xylene	*76.3*			*21.0-146*		*06/09/2018 09:16*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.1		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000271	0.0232	1	06/09/2018 09:29	WG1121569
Alpha BHC	U		0.000224	0.0232	1	06/09/2018 09:29	WG1121569
Beta BHC	U		0.000352	0.0232	1	06/09/2018 09:29	WG1121569
Delta BHC	U		0.000175	0.0232	1	06/09/2018 09:29	WG1121569
Gamma BHC	U		0.000284	0.0232	1	06/09/2018 09:29	WG1121569
4,4-DDD	U		0.000190	0.0232	1	06/09/2018 09:29	WG1121569
4,4-DDE	U		0.000192	0.0232	1	06/09/2018 09:29	WG1121569
4,4-DDT	U		0.000309	0.0232	1	06/09/2018 09:29	WG1121569
Dieldrin	U		0.000103	0.00232	1	06/09/2018 09:29	WG1121569
Endosulfan I	U		0.000248	0.0232	1	06/09/2018 09:29	WG1121569
Endosulfan II	U		0.000267	0.0232	1	06/09/2018 09:29	WG1121569
Endosulfan sulfate	U		0.000197	0.0232	1	06/09/2018 09:29	WG1121569
Endrin	U		0.000254	0.0232	1	06/09/2018 09:29	WG1121569
Endrin aldehyde	U		0.000281	0.0232	1	06/09/2018 09:29	WG1121569
Endrin ketone	U		0.000185	0.0232	1	06/09/2018 09:29	WG1121569
Heptachlor	U		0.000117	0.0232	1	06/09/2018 09:29	WG1121569
Heptachlor epoxide	U		0.000439	0.0232	1	06/09/2018 09:29	WG1121569
Hexachlorobenzene	U		0.000260	0.0232	1	06/09/2018 09:29	WG1121569
Methoxychlor	U		0.000308	0.0232	1	06/09/2018 09:29	WG1121569
Chlordane	U		0.0453	0.232	1	06/09/2018 09:29	WG1121569
Toxaphene	U		0.0418	0.464	1	06/09/2018 09:29	WG1121569
(S) Decachlorobiphenyl	*44.3*			*10.0-148*		*06/09/2018 09:29*	WG1121569
(S) Tetrachloro-m-xylene	*62.3*			*21.0-146*		*06/09/2018 09:29*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.1		1	06/01/2018 09:08	WG1118299

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000250	0.0215	1	06/09/2018 09:41	WG1121569
Alpha BHC	U		0.000207	0.0215	1	06/09/2018 09:41	WG1121569
Beta BHC	U		0.000326	0.0215	1	06/09/2018 09:41	WG1121569
Delta BHC	U		0.000162	0.0215	1	06/09/2018 09:41	WG1121569
Gamma BHC	U		0.000263	0.0215	1	06/09/2018 09:41	WG1121569
4,4-DDD	0.00105	J	0.000176	0.0215	1	06/09/2018 09:41	WG1121569
4,4-DDE	U		0.000177	0.0215	1	06/09/2018 09:41	WG1121569
4,4-DDT	0.00258	J	0.000286	0.0215	1	06/09/2018 09:41	WG1121569
Dieldrin	U		0.0000956	0.00215	1	06/09/2018 09:41	WG1121569
Endosulfan I	U		0.000230	0.0215	1	06/09/2018 09:41	WG1121569
Endosulfan II	U		0.000247	0.0215	1	06/09/2018 09:41	WG1121569
Endosulfan sulfate	U		0.000183	0.0215	1	06/09/2018 09:41	WG1121569
Endrin	U		0.000235	0.0215	1	06/09/2018 09:41	WG1121569
Endrin aldehyde	U		0.000260	0.0215	1	06/09/2018 09:41	WG1121569
Endrin ketone	U		0.000171	0.0215	1	06/09/2018 09:41	WG1121569
Heptachlor	U		0.000109	0.0215	1	06/09/2018 09:41	WG1121569
Heptachlor epoxide	U		0.000406	0.0215	1	06/09/2018 09:41	WG1121569
Hexachlorobenzene	U		0.000241	0.0215	1	06/09/2018 09:41	WG1121569
Methoxychlor	U		0.000285	0.0215	1	06/09/2018 09:41	WG1121569
Chlordane	U		0.0419	0.215	1	06/09/2018 09:41	WG1121569
Toxaphene	U		0.0387	0.430	1	06/09/2018 09:41	WG1121569
(S) Decachlorobiphenyl	*61.3*			*10.0-148*		*06/09/2018 09:41*	WG1121569
(S) Tetrachloro-m-xylene	*81.3*			*21.0-146*		*06/09/2018 09:41*	WG1121569

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.7		1	06/09/2018 07:42	WG1121575

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000266	0.0228	1	06/09/2018 09:54	WG1121569
Alpha BHC	U		0.000220	0.0228	1	06/09/2018 09:54	WG1121569
Beta BHC	U		0.000346	0.0228	1	06/09/2018 09:54	WG1121569
Delta BHC	U		0.000172	0.0228	1	06/09/2018 09:54	WG1121569
Gamma BHC	U		0.000279	0.0228	1	06/09/2018 09:54	WG1121569
4,4-DDD	U		0.000187	0.0228	1	06/09/2018 09:54	WG1121569
4,4-DDE	U		0.000188	0.0228	1	06/09/2018 09:54	WG1121569
4,4-DDT	U		0.000303	0.0228	1	06/09/2018 09:54	WG1121569
Dieldrin	U		0.000102	0.00228	1	06/09/2018 09:54	WG1121569
Endosulfan I	U		0.000244	0.0228	1	06/09/2018 09:54	WG1121569
Endosulfan II	U		0.000262	0.0228	1	06/09/2018 09:54	WG1121569
Endosulfan sulfate	U		0.000194	0.0228	1	06/09/2018 09:54	WG1121569
Endrin	U		0.000250	0.0228	1	06/09/2018 09:54	WG1121569
Endrin aldehyde	U		0.000276	0.0228	1	06/09/2018 09:54	WG1121569
Endrin ketone	U		0.000181	0.0228	1	06/09/2018 09:54	WG1121569
Heptachlor	U		0.000115	0.0228	1	06/09/2018 09:54	WG1121569
Heptachlor epoxide	U		0.000431	0.0228	1	06/09/2018 09:54	WG1121569
Hexachlorobenzene	U		0.000256	0.0228	1	06/09/2018 09:54	WG1121569
Methoxychlor	U		0.000302	0.0228	1	06/09/2018 09:54	WG1121569
Chlordane	U		0.0445	0.228	1	06/09/2018 09:54	WG1121569
Toxaphene	U		0.0411	0.456	1	06/09/2018 09:54	WG1121569
(S) Decachlorobiphenyl	*57.5*			*10.0-148*		*06/09/2018 09:54*	WG1121569
(S) Tetrachloro-m-xylene	*78.6*			*21.0-146*		*06/09/2018 09:54*	WG1121569

Method Blank (MB)

(MB) R3315064-1 06/01/18 09:08

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L997491-07 Original Sample (OS) • Duplicate (DUP)

(OS) L997491-07 06/01/18 09:08 • (DUP) R3315064-3 06/01/18 09:08

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.5	94.5	1	0.00191		5

Laboratory Control Sample (LCS)

(LCS) R3315064-2 06/01/18 09:08

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3316858-1 06/09/18 07:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

L999812-01 Original Sample (OS) • Duplicate (DUP)

(OS) L999812-01 06/09/18 07:42 • (DUP) R3316858-3 06/09/18 07:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	96.3	95.5	1	0.834		5

Laboratory Control Sample (LCS)

(LCS) R3316858-2 06/09/18 07:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3317658-1 06/09/18 07:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.000233	0.0200
Alpha BHC	U		0.000193	0.0200
Beta BHC	U		0.000303	0.0200
Delta BHC	U		0.000151	0.0200
Gamma BHC	U		0.000245	0.0200
4,4-DDD	U		0.000164	0.0200
4,4-DDE	U		0.000165	0.0200
4,4-DDT	U		0.000266	0.0200
Dieldrin	U		0.0000890	0.00200
Endosulfan I	U		0.000214	0.0200
Endosulfan II	U		0.000230	0.0200
Endosulfan sulfate	U		0.000170	0.0200
Endrin	U		0.000219	0.0200
Endrin aldehyde	U		0.000242	0.0200
Endrin ketone	U		0.000159	0.0200
Heptachlor	U		0.000101	0.0200
Heptachlor epoxide	U		0.000378	0.0200
Hexachlorobenzene	U		0.000224	0.0200
Methoxychlor	U		0.000265	0.0200
Chlordane	U		0.0390	0.200
Toxaphene	U		0.0360	0.400
(S) Decachlorobiphenyl	*67.2*			*10.0-148*
(S) Tetrachloro-m-xylene	*74.4*			*21.0-146*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3317658-2 06/09/18 07:36 • (LCSD) R3317658-3 06/09/18 07:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0667	0.0512	0.0490	76.8	73.5	55.0-137			4.38	29
Alpha BHC	0.0667	0.0523	0.0499	78.4	74.9	55.0-136			4.58	28
Beta BHC	0.0667	0.0467	0.0449	70.0	67.3	53.0-133			3.94	28
Delta BHC	0.0667	0.0517	0.0495	77.5	74.2	53.0-139			4.37	29
Gamma BHC	0.0667	0.0502	0.0482	75.3	72.2	54.0-136			4.17	29
4,4-DDD	0.0667	0.0518	0.0492	77.7	73.7	51.0-141			5.25	29
4,4-DDE	0.0667	0.0492	0.0470	73.8	70.5	53.0-142			4.62	30
4,4-DDT	0.0667	0.0440	0.0425	65.9	63.8	47.0-143			3.31	30
Dieldrin	0.0667	0.0510	0.0487	76.5	73.0	54.0-141			4.68	29
Endosulfan I	0.0667	0.0497	0.0474	74.5	71.1	54.0-141			4.61	29

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3317658-2 06/09/18 07:36 • (LCSD) R3317658-3 06/09/18 07:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Endosulfan II	0.0667	0.0491	0.0470	73.6	70.5	53.0-140			4.36	28
Endosulfan sulfate	0.0667	0.0498	0.0475	74.7	71.3	52.0-141			4.63	29
Endrin	0.0667	0.0476	0.0456	71.4	68.4	52.0-137			4.31	29
Endrin aldehyde	0.0667	0.0476	0.0444	71.4	66.6	30.0-127			7.06	31
Endrin ketone	0.0667	0.0523	0.0501	78.5	75.1	51.0-139			4.36	28
Heptachlor	0.0667	0.0495	0.0478	74.3	71.6	53.0-144			3.61	29
Heptachlor epoxide	0.0667	0.0502	0.0480	75.3	71.9	54.0-137			4.57	28
Hexachlorobenzene	0.0667	0.0478	0.0455	71.6	68.2	50.0-135			4.80	28
Methoxychlor	0.0667	0.0445	0.0426	66.7	63.9	49.0-145			4.29	29
(S) Decachlorobiphenyl				*68.5*	*63.6*	*10.0-148*				
(S) Tetrachloro-m-xylene				*75.0*	*72.6*	*21.0-146*				

L999812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L999812-01 06/09/18 08:01 • (MS) R3317658-4 06/09/18 08:14 • (MSD) R3317658-5 06/09/18 08:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0692	U	0.0608	0.0629	87.7	90.9	1	19.0-152			3.55	24
Alpha BHC	0.0692	U	0.0581	0.0596	84.0	86.1	1	39.0-152			2.50	21
Beta BHC	0.0692	U	0.0523	0.0527	75.5	76.1	1	38.0-150			0.760	20
Delta BHC	0.0692	U	0.0547	0.0563	79.0	81.3	1	34.0-155			2.87	21
Gamma BHC	0.0692	U	0.0547	0.0560	79.0	80.9	1	38.0-153			2.41	21
4,4-DDD	0.0692	U	0.0739	0.0762	107	110	1	22.0-160			3.01	25
4,4-DDE	0.0692	U	0.0739	0.0773	107	112	1	10.0-160	P	P	4.51	27
4,4-DDT	0.0692	0.0290	0.0835	0.0875	78.8	84.6	1	10.0-160			4.66	28
Dieldrin	0.0692	U	0.122	0.129	176	186	1	30.0-158	J5	J5	5.23	25
Endosulfan I	0.0692	U	0.0950	0.0989	137	143	1	31.0-155			3.98	25
Endosulfan II	0.0692	U	0.0640	0.0644	92.5	93.0	1	32.0-156	P	P	0.607	25
Endosulfan sulfate	0.0692	U	0.0609	0.0621	88.0	89.7	1	31.0-158			1.93	24
Endrin	0.0692	U	0.0745	0.0767	108	111	1	30.0-149			2.93	25
Endrin aldehyde	0.0692	U	0.0917	0.0966	132	139	1	20.0-157			5.18	26
Endrin ketone	0.0692	U	0.0690	0.0704	99.7	102	1	32.0-154			1.90	23
Heptachlor	0.0692	U	0.0583	0.0603	84.2	87.0	1	18.0-160			3.37	23
Heptachlor epoxide	0.0692	U	0.0651	0.0653	94.0	94.2	1	31.0-154	P	P	0.269	25
Hexachlorobenzene	0.0692	U	0.0511	0.0531	73.8	76.6	1	26.0-146			3.72	21
Methoxychlor	0.0692	U	0.0739	0.0776	107	112	1	10.0-160			4.99	27
(S) Decachlorobiphenyl					*70.1*	*73.4*		*10.0-148*				
(S) Tetrachloro-m-xylene					*76.5*	*82.5*		*21.0-146*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
P	RPD between the primary and confirmatory analysis exceeded 40%.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

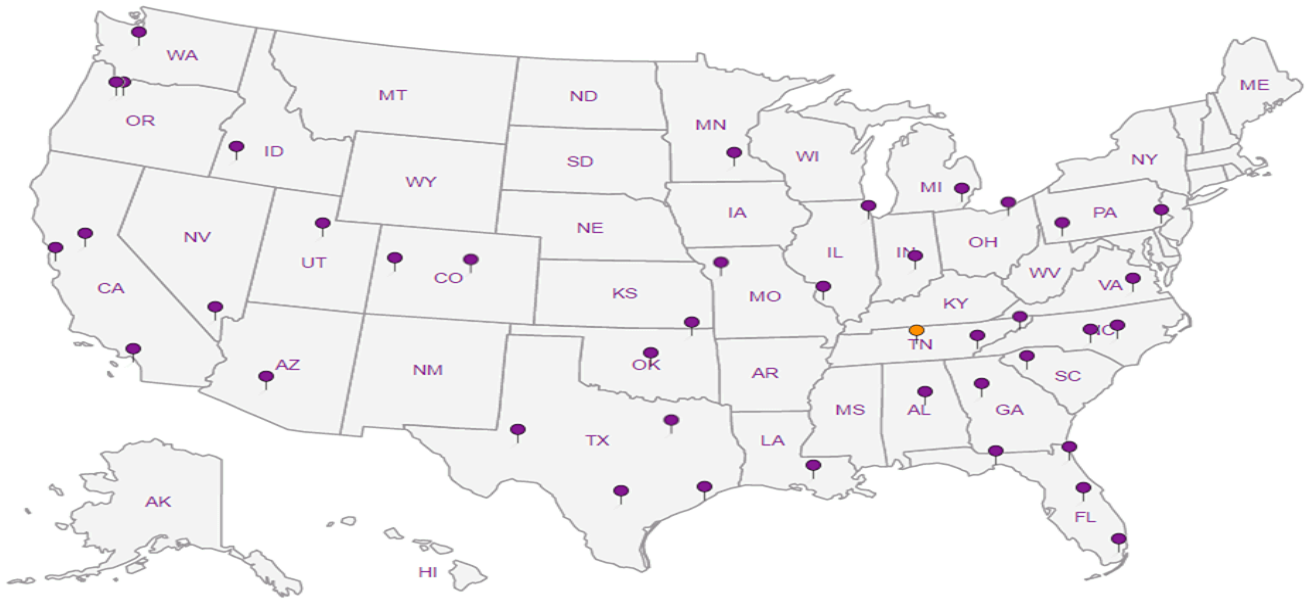
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing information:
Accounts Payable - Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Pres Chk

Report to: Jacqueline Day

Email To: jday@aeiconsultants.com, tyerkes@aeiconsultants.com

Project Description:

City/State Collected:

Phone: 925-746-6000
Fax:

Client Project #: 387046

Lab Project #: AEICONWCCA-387046

Collected by (print): Tamara Yerkes

Site/Facility ID #:

P.O. #: 160638

Collected by (signature):

Rush? (Lab MUST Be Notified)
__ Same Day __ Five Day
__ Next Day __ 5 Day (Rad Only)
__ Two Day __ 10 Day (Rad Only)
__ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N __ Y X

Chain of Custody Page __ of __

ESC LAB SCIENCES

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 947313 947491

Table #

Acctnum: AEICONWCCA

Template:

Prelogin: 999812

TSR:

PB:

Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	OC Pesticides by EPA 8081A	Arsenic by EPA 6010B	Lead by EPA 6010B								Remarks	Sample # (lab only)
SB-4D	comp/grab	SS	0.5	2/25/18	1112	1	X	X	X								V4 09	16 19 (19)20
SB-4D		SS	2	2/25/18	1114	1										01	Hold	
SB-5A	Comp	SS	0.5	2/25/18	1020	1	X									01	V5	17 20 21
SB-5A		SS	2	2/25/18	1023	1										02	Hold	
SB-5B	Comp	SS	0.5	2/25/18	1015	1	X									03	V5	18 21 22
SB-5B		SS	2	2/25/18	1018	1										04	Hold	
SB-5C	Comp	SS	0.5	2/25/18	1141	1	X									05	V5	19 22 23
SB-5C		SS	2	2/25/18	1143	1										06	Hold	
SB-5D	comp/grab	SS	0.5	2/25/18	1146	1	X	X	X							07 ~~V5 10~~	24 25	20 23 24
SB-5D		SS	2	2/25/18	1148	1										08	Hold	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ______

Remarks:
Samples SB-4D and SB-5D composite for OCPs by EPA 8081A, discrete sample for arsenic and lead

pH ______ Temp ______
Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier __ ______

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __ Y __ N
COC Signed/Accurate: __ Y __ N
Bottles arrive intact: __ Y __ N
Correct bottles used: __ Y __ N
Sufficient volume sent: __ Y __ N
If Applicable
VOA Zero Headspace: __ Y __ N
Preservation Correct/Checked: __ Y __ N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)		
[signature]	5/25/18	1551		Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 5.7 °C Bottles Received: 44	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 5/26/18 Time: 0845	Hold: Condition: NCF / OK

Matt Shacklock

From: Brian Ford
Sent: Thursday, June 07, 2018 2:48 PM
To: Login; Sample Storage; Extractions; Brian Ford
Subject: L997491 *AEICONWCCA* re-log and log off hold ***ooh tomorrow***

Importance: High

Please re-log and log off hold for SV8081CA and TS as EX due 06/14. SV8081CA: 1.5x multiplier for short hold. **Holding time expires tomorrow, Fri 06/08.** Hold labels 5-172, 5-174.

SB-5A- 0.5
SB-5A-2
SB-5B- 0.5
SB-5B-2
SB-5C- 0.5
SB-5C-2
L997491-10 (SB-5D- 0.5) transfer TS.
SB-5D-2

Thanks,

Brian Ford
Technical Service Representative
ESC Lab Sciences-a subsidiary of Pace Analytical
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.9772
bford@esclabsciences.com | www.esclabsciences.com

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