Project No.
15535.000.000

July 10, 2019

Mr. Joe Martin
TH Trumark Homes, LLC
450 Newport Center Drive, Suite 300
Newport Beach, CA 92660

Subject: Shady View (APN 1057-261-06)
Chino Hills, California

PHASE II ENVIRONMENTAL SITE ASSESSMENT UPDATE

References:
1. Hillmann Consulting; Phase I Environmental Site Assessment, APN 1057-261-06; Chino Hills, California 91709; September 18, 2014.
2. Hillmann Consulting; Limited Phase II Subsurface Investigation Report, APN 1057-261-06, Chino Hills, California 91709; September 24, 2014.
3. ENGEO; Shady View (APN 1057-261-06) Phase I Environmental Site Assessment DRAFT; Chino Hills, California; June 18, 2019.

Dear Mr. Martin:

We are pleased to submit the findings of our phase II environmental site assessment (ESA) conducted at the subject property (Property) in Chino Hills, California. The purpose of this phase II assessment was to address potential data gaps associated with previous environmental studies performed by others at the Site.

1.0 BACKGROUND

The Property, approximately 131 acres in area, is identified by Assessor's Parcel Number (APN) 1057-261-06 and is located in Chino Hills, California (Figure 1). The Property is zoned as low-density residential and agricultural ranch.

Record reviews found that the Property is generally undeveloped, with the exception of the northern portion of the Property. A paved road bisects the Property in the east-west direction, leading to a small developed area near the eastern Property boundary. The developed area consists of three crude oil above-ground storage tanks (ASTs), a scrap yard, storage area, two trenches (both contain construction debris), and a mobile home. Review of historical records indicates that the existing ASTs have been present since at least 1959, and three additional ASTs were present in the northwestern portion of the Property beginning in the 1973 topographic map and continuing through at least 2009.

2.0 PREVIOUS INVESTIGATIONS

Hillmann Consulting; Phase I Environmental Site Assessment, APN 1057-261-06; Chino Hills, California 91709; September 18, 2014.

At the time of the 2014 phase I environmental site assessment, the Property was mostly undeveloped with three developed areas near the east-central boundary. The developed areas consist of a paved garage, a residential mobile home, and a paved storage tank area for crude oil. Hillmann noted an "oil pipeline" extending west-to-east to the storage tanks from oil wells located adjacent to the west. Hillman identified two RECs, no controlled RECs, and no historical RECs. The two RECs included:

- *The Property has been used to store crude oil produced from oil wells adjacent to the east and west for approximately 50 years. Hillmann considers this past use of the Property as a REC.*

- *Two excavated areas on the Property have been utilized for waste disposal purposes for approximately 50 years. Hillmann considers this past use of the Property as a REC.*

Hillmann recommended a phase II environmental site assessment subsurface investigation to determine whether the current and past use of the Property and adjoining properties for producing and storing crude oil had resulted in releases of hazardous or petroleum substances, and to characterize the waste disposed in the excavated areas.

Hillmann Consulting; Limited Phase II Subsurface Investigation Report, APN 1057-261-06, Chino Hills, California 91709; September 24, 2014.

Hillmann performed a limited subsurface investigation for the Property to test the underlying soil and soil vapor for evidence of petroleum hydrocarbons, volatile and semi-volatile compounds, polychlorinated biphenyls (PCBs), and heavy metals associated with the past site usage. Six pits were excavated to total depths ranging from 3 to 8 feet below grade in the northeastern region of the Property. Excavation pits were selected near existing crude oil storage area and sumps and in debris-filled trenches that may have been used for waste disposal.

Two soil samples within the debris-filled trenches reported detectable levels of petroleum hydrocarbons: 260 milligram per kilogram (mg/kg) diesel-range hydrocarbons and 190 mg/kg oil-range hydrocarbons. The detected concentrations exceeded 2013 San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Tier 1 Environmental Screening Levels (ESLs) for diesel and oil-range hydrocarbons. Results indicated no detections of semi-volatile compounds or PCBs. In addition, results indicated that none of the samples had metal concentrations greater than the California Human Health Screening Levels (CHHSLs), except for arsenic. Arsenic is a metal commonly found in moderate concentrations of 12 mg/kg in naturally occurring sediment in southern California. The six soil gas samples reported non-detectable levels of volatile organic compounds (VOCs).

Hillmann recommended additional soil sampling to define the extent of hydrocarbon contamination in soil near Borings B1 and B2. They suggest excavating to at least the native soil interface, which is estimated to be approximately 3 feet below fill material. In addition, confirmation

of soil sampling was recommended to ensure that underlying soil meets the residential screening levels, especially in the area immediately beneath the ASTs.

ENGEO; Shady View (APN 1057-261-06) Phase I Environmental Site Assessment DRAFT; Chino Hills, California; June 18, 2019.

ENGEO identified three recognized environmental conditions (RECs) and one potential environmental concern:

RECs:

- Historic Petroleum Storage: Three former ASTs were present in the northwestern portion of the Property from at least 1973 through at least 2009. The potential presence of petroleum-impacted soil and soil gas is a REC for the Property.

- Current Petroleum Storage: Three existing ASTs are currently present along the eastern Property boundary, and three former ASTs were located in the northwestern portion of the Property. Numerous drums are also stored at the Property. The potential presence of petroleum-impacted soil, groundwater, and soil gas is a REC for the Property.

- A scrap yard and storage area is located directly north of the existing ASTs.

Potential Environmental Concern:

- Two trenches are located near the eastern Property boundary, north of the scrap yard. These trenches contain visible construction-related debris (bricks, concrete, and wood). In addition, the 2014 Limited Subsurface Investigation reported that two soil samples from the trenches contained diesel and oil petroleum hydrocarbons at levels that exceed screening levels for residential land use.

Based on the above information, ENGEO recommended a subsurface investigation to evaluate potential subsurface impacts associated with the past use of the Property.

3.0 SCOPE OF FIELD EXPLORATION

Field sampling activities associated with the phase II ESA were conducted on June 19, 2017. Prior to drilling, a boring permit was obtained from the County of San Bernardino Department of Environmental Health. A Geoprobe® direct-push rig was utilized to drill 13 borings for the purpose of soil, soil gas, and groundwater sampling.

There were three general areas of investigation: the existing above-ground storage tanks (E-AST), the former above-ground storage tanks (F-AST), and the scrap yard. Details pertaining to each of these tasks are presented below.

3.1 SOIL GAS ASSESSMENT

In order to evaluate potential vapor intrusion concerns, a soil gas assessment was performed. Five temporary soil gas borings were installed to a depth of approximately 5 feet below ground surface (bgs). Two borings were installed near the assumed location of the area of the former

above-ground storage tanks (F-AST), and three borings were installed within and near the existing above-ground storage tanks (E-AST) as shown in Figures 3 and 4. Each of the locations yielded soil gas samples. Soils across the Property were primarily silty sands and gravelly sands, resulting in high permeable conditions for soil gas sampling.

The installation and sampling of the soil gas borings were performed in general conformance with the Department of Toxic Substances Control (DTSC) Final Advisory Active Soil Gas Investigations (July 2015), using the following procedures:

- The soil gas monitoring well casings were constructed with ¼-inch-diameter Teflon® tubing equipped with a filter at the base of the tubing. The well installation was performed with a direct-push probe rig, which advanced an approximately 2-inch-diameter boring to a depth of 5 feet below the natural grade ground surface.

- The bottom of the well casing was equipped with a filter situated at a depth of 5 feet below the ground surface, centered in the middle of a 1-foot-layer of No. 3 sand. Six inches of dry bentonite was installed on top of the sand, and the remaining annular space was filled with hydrated bentonite grout to the surface.

- Following installation of the annular seal, the well casings were equipped with a permanent Swagelok® ferrule and nut. A threaded plug was then screwed into the nut and the mandatory 2-hour equilibration time began. The manifold was connected to the well tubing by threading the permanent Swagelok® fitting on the well casing onto the manifold. The manifold consisted of a stainless steel summa manifold with a built-in flow controller set to 150 milliliters per minute (ml/min).

- After the 2-hour equilibration time elapsed, a purge vacuum canister was attached to the manifold connection and a shut-in test was performed to assess for potential leaks. The shut-in test consisted of applying a vacuum with the vacuum canister, closing the purge valve, and observing the vacuum gauge for 2 minutes to check for a drop in the vacuum. After the gauge maintained its position for 2 minutes, three well volumes were purged from each well. After purging was complete, the valve on the manifold was closed, the purge canister was removed, and the sample canister was attached.

- The soil gas samples were collected by opening the sample canister valve and allowing the sample canister to extract soil gas until the vacuum in the sample canister reached approximately 4 inches of mercury. The leak detection compound 1,1-diflouroethane (1,1-DFA) was applied by wrapping a doused rag around the manifold fittings during sample collection. Each sample canister was labeled with a unique identification number, sampling time and pre- and post-sample vacuum readings. The soil gas sample was submitted to Enthalpy Analytical, a State-certified fixed laboratory, under documented chain-of-custody for analysis of VOCs by EPA Test Method TO-15, and methane by EPA Test Method 8015M.

3.2 SOIL ASSESSMENT

Following collection, the samples were sealed with Teflon® and plastic end caps and preserved in an ice-cooled chest, then transported under documented chain-of-custody to Enthalpy Analytical, a State-accredited laboratory.

3.2.1 Former and Existing Above-Ground Storage Tank Areas: Direct-Push Borings

To determine if past and present activities at the site have impacted subsurface soils, nine direct-push borings were advanced to 8 feet bgs. Five of the borings were located near the assumed location of the area of the former above-ground storage tanks, and the other four borings were located within and near the existing above-ground storage tanks.

Twenty-seven soil samples were retrieved within continuous acetate core liners measuring 4 feet in length. Specific soil samples were collected for laboratory analysis by cutting a 6-inch portion of the soil core liners from the desired sample depths of surface, 3, and 8 feet bgs. A photoionization detector (PID) was used to assist in characterization of the soils. None of the borings exhibited detectable readings on the PID. The borings were filled with grout upon completion of sampling. Each soil sample was submitted to the laboratory and analyzed on a discrete basis for the following:

- Total petroleum hydrocarbons (TPH) as diesel and motor oil (with silica gel cleanup) by EPA Test Method 8015M.
- Volatile organic compounds (VOCs) by EPA Test Method 8260.
- CAM-17 metals by EPA Test Method 6010.

3.2.2 Scrapyard Area: Near-Surface Sampling

Six soil samples were recovered using hand-sampling equipment at depths of 0 to 6 inches throughout the scrap yard (Figure 4). We instructed the laboratory to combine the samples into two 3-point composite samples and analyze them for TPH-diesel and motor oil (with gel cleanup) by EPA Test Method 8015M, and CAM-17 metals by EPA Test Method 6010.

3.3 GRAB GROUNDWATER ASSESSMENT

One boring was advanced with the intention of collecting groundwater samples. The Geoprobe® direct-push boring was advanced to the north of the existing AST area until refusal, approximately 35 feet bgs. A temporary PVC casing was placed in the borehole to facilitate groundwater collection and allowed to sit for over 4 hours. No groundwater was encountered; therefore, no groundwater samples were collected. The boring was filled with grout upon determination that no groundwater was encountered, in accordance with County requirements.

4.0 ANALYTICAL RESULTS

Laboratory test results were compared to corresponding United States Environmental Protection Agency USEPA Regional Screening Levels (RSLs[1]), California Department of Toxic Substance Control Modified Screening Levels (DTSC SLs[2]), and San Francisco Regional Bay Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs[3]) assuming a residential land use scenario. The ESLs are often used outside of the San Francisco Bay Area, as they provide

[1] U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for residential land use (May 2019).
[2] Department of Toxic Substance Control (DTSC) Modified Screening Levels DTSC-SLs for April 2019 for residential land use.
[3] San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs), Direct Exposure Human Health, Residential Land Use, Shallow Soil Exposure, January 2019 (Revision 1).

conservative screening levels for chemicals commonly found at sites with environmental impacts. The results are summarized in Tables A and B, attached.

4.1 SOIL GAS SAMPLING

Of the five soil gas samples, we requested the lab to analyze both samples within the former AST area and to analyze two of the three samples within and near the existing AST area. The remaining sample was placed on hold pending laboratory results of the other soil gas samples.

The four analyzed soil gas samples reported detectable VOC analytes, including 1,2,4-trimethylbenzene, 1,3-butadiene, 4-ethyltoluene, 4-methyl-2-pentanone (MIBK), acetone, benzene, chloroform, cyclohexane, toluene, and xylenes. We compared the detected soil gas concentrations to the established USEPA's RSLs and DTSC SLs for residential air. Several of the reported constituents, including 1,3-butadiene, benzene, and chloroform, exceed respective "tier 1" screening levels for soil gas. Methane was reported as non-detectable in all soil gas samples.

A summary of the soil gas analytical results is presented in Table A. The laboratory results are presented in their entirety in Appendix A.

4.2 SOIL SAMPLING

4.2.1 Former and Existing Above-Ground Storage Tank Areas: Direct-Push Borings

Initially, the surface samples of each of the nine soil borings were analyzed and the remaining samples were placed on hold pending laboratory results. Following the initial laboratory report, eight additional samples were selected for TPH-diesel and TPH-motor oil analysis. As presented in Table B, TPH-diesel was detected in 10 of the 17 analyzed discrete samples, and TPH-motor oil was detectable in four of the samples. The RSLs and DTSC-SLs do not establish screening levels for TPH-diesel or TPH-motor oil – therefore, the results were compared to ESLs.

Three soil samples, all within the existing AST area, reported concentrations of TPH-diesel which exceed the corresponding ESL. One VOC, methylene chloride, was detected in three samples, all within the existing AST area, and all below the corresponding screening levels. The reported metal concentrations were below screening levels with the exception of arsenic. Arsenic was detected in all nine of the surface soil samples ranging from 2.32 to 6.43 milligrams per kilograms (mg/kg). These concentrations are within the background concentration of 12 mg/kg for arsenic in Southern California[4].

The soil analytical results are summarized in Table B, and the laboratory results are presented in their entirety in Appendix A.

[4] Department of Toxic Substances Control (DTSC) Determination of a Southern California Background Arsenic Concentration in Soil, March 2008

4.2.2 Scrap Yard Area: Near Surface Sampling

Review of the composite sample laboratory test results found detectable concentrations of TPH-diesel and motor oil in one composite sample, as well as CAM 17 metals in both composite samples. The concentrations reported for TPH-diesel and TPH-motor oil, as well as CAM-17 metals, are below the respective residential screening levels with the exception of arsenic. Arsenic was detected in both composite soil samples, concentrations were reported as 4.26 and 6.91 mg/kg. These concentrations are within the background concentration of 12 mg/kg for arsenic in Southern California.

A summary of the scrap yard soil analytical results is presented in Table B. The laboratory results are presented in their entirety in Appendix A.

4.3 GROUNDWATER SAMPLING

Groundwater was not encountered; therefore, no groundwater samples were recovered or analyzed.

5.0 CONCLUSION AND RECOMMENDATIONS

- Soil gas samples reported several VOC concentrations exceeding the respective conservative "Tier 1" screening levels for soil gas. Exceeding screening levels for soil gas does not necessarily mean that a health risk exists; rather, exceeding screening levels indicates that additional analysis and study should be performed to determine if a health risk, such as a potential concern for vapor intrusion, exists under the proposed land redevelopment scenario. These "Tier 1" screening levels do not address several factors, including new construction material and techniques for foundations.
    - Additional activities are recommended. Additional activities could include additional subsurface investigations, a site-specific health risk assessment, and/or discussions with appropriate agencies.

- Soil sample results from the former and existing AST areas reported detectable concentrations of TPH-diesel in 10 samples, ranging from 18 to 2,200 mg/kg. Three of these concentrations, located within the existing AST area, exceed the respective ESL. The remaining analytes, TPH- motor oil, and VOCs, were reported as non-detectable.
    - Prior to demolition and grading, we recommend that a Site Management Plan be developed for use during future subsurface work, specifically for the petroleum-impacted soils in the vicinity of the existing AST. The Soil Management Plan should establish guidelines to address the soil excavation and removal during the construction process.

- The scrap yard soil samples reported detectable concentrations of TPH-diesel and motor oil, as well as CAM 17 metals. Each of the concentrations was below the corresponding screening level for residential use, though the area near the storage shed had soils with visible surface stains.
    - We recommend scarifying and removing the upper 6 inches of soil near the storage shed within the scrap yard area (approximately 0.8 acre), resulting in approximately 645 cubic yards of soil. We recommend that this soil be disposed of at a non-hazardous landfill, or potentially be placed in future roadways or deep fill areas.

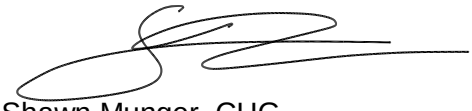
- The two debris-filled trenches located north of the scrap yard were not investigated during this assessment. However, the 2014 assessment indicated that the two samples collected from these trenches had diesel and oil petroleum hydrocarbons concentrations that exceed screening levels for residential land use. The 2014 report concluded that the soil from the two trenches should be excavated to at least native soil, followed by confirmation soil sampling.
    - In addition to the recommendation to remove the soil and debris, we recommend that a Site Management Plan be developed prior to excavation. The Soil Management Plan should establish guidelines to address the soil excavation and removal. Based on the 2014 samples, the debris could be disposed at a non-hazardous landfill. We concur that confirmation samples should be taken after the material is excavated.

In addition to the above recommendations, ENGEO recommends that all regulated chemicals and wastes, generally within the scrap yard area, be removed by the current ownership, prior to acquisition, with a final walk through to confirm the removal of regulated chemicals/waste.

If you have any questions regarding this report, please contact us.

Sincerely,

ENGEO Incorporated



Adrianna Lundberg Shawn Munger, CHG
aml/sm/jf

Attachments: Figures 1 through 5
Tables A and B
Appendix A – Laboratory Analytical Reports

FIGURES

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BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

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VICINITY MAP

SHADY VIEW

CHINO HILLS, CALIFORNIA

PROJECT NO.: 15535.000.000		FIGURE NO. 1
SCALE: AS SHOWN		
DRAWN BY: GLJ	CHECKED BY: SPM	

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BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

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SITE PLAN
SHADY VIEW
CHINO HILLS, CALIFORNIA

PROJECT NO.: 15535.000.000
SCALE: AS SHOWN
DRAWN BY: GLJ
CHECKED BY: SPM

FIGURE NO. 2

ORIGINAL FIGURE PRINTED IN COLOR

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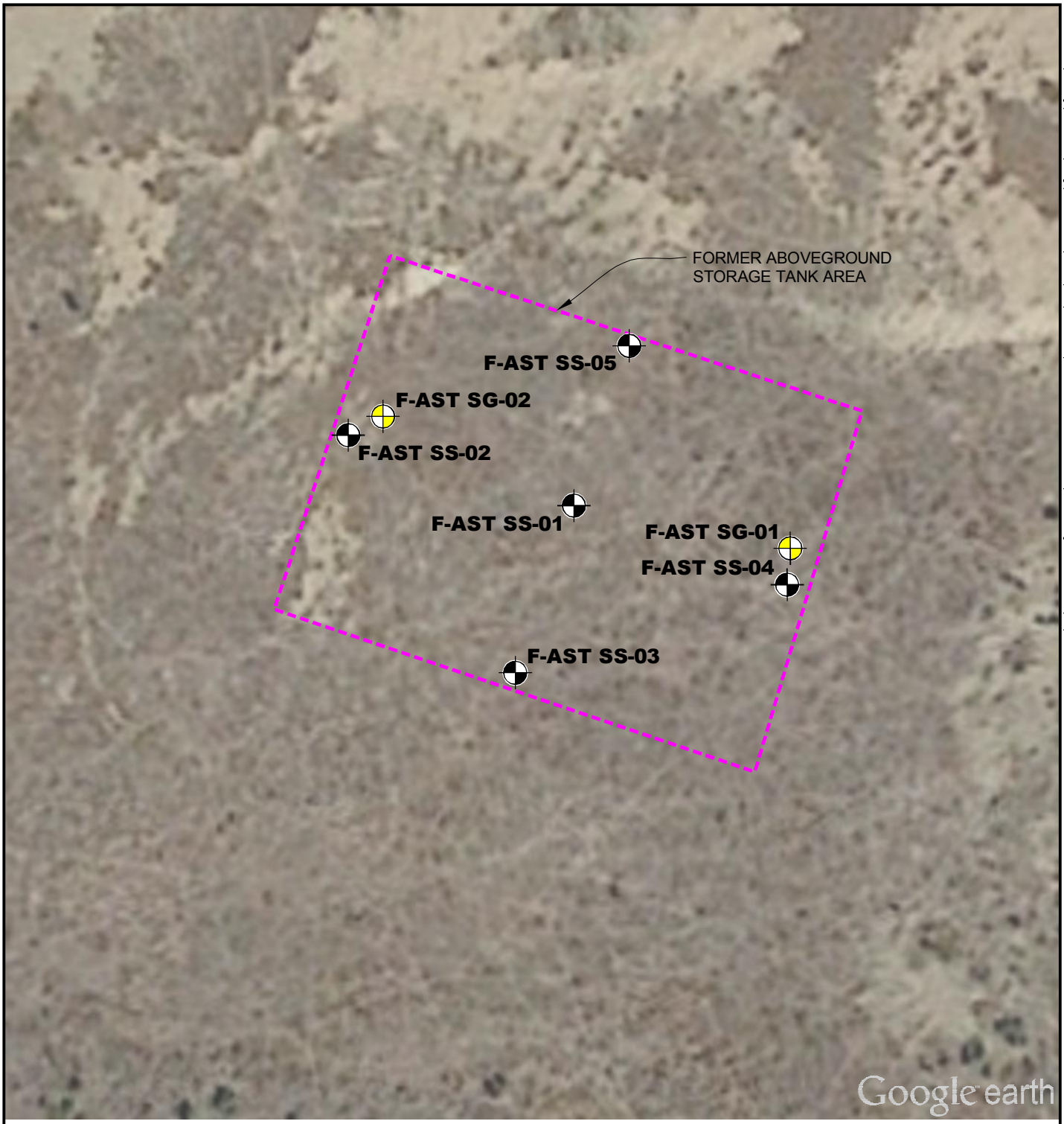

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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

F-AST SG-02 SOIL GAS BORING (ENGEO, 2019)

F-AST SS-05 SOIL BORING (ENGEO, 2019)

BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

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INSET 1 - FORMER AST AREA
SHADY VIEW
CHINO HILLS, CALIFORNIA

PROJECT NO.: 15535.000.000		FIGURE NO. 3
SCALE: AS SHOWN		
DRAWN BY: GLJ	CHECKED BY: SPM	

ORIGINAL FIGURE PRINTED IN COLOR

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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

E-AST SG-03 SOIL GAS BORING (ENGEO, 2019)

E-AST SS-04 SOIL BORING (ENGEO, 2019)

SY SS-06 NEAR SURFACE SOIL SAMPLE (ENGEO, 2019)

B6/SG6 PREVIOUS SOIL GAS AND SOIL BORING (HILLMANN, 2014)

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BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

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INSET 2 - EXISTING AST AREA AND SCRAP YARD

SHADY VIEW

CHINO HILLS, CALIFORNIA

PROJECT NO.: 15535.000.000	FIGURE NO. 4
SCALE: AS SHOWN	
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BORING E-AST SS-01 WITHIN
EXISTING AST AREA

BORING E-AST SS-02 WITHIN
EXISTING AST AREA 2

BORING E-AST SS-03 WITHIN
EXISTING AST AREA

BORING F-AST SS 01 WITHIN
FORMER AST AREA

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SITE PHOTOGRAPHS
SHADY VIEW
CHINO HILLS, CALIFORNIA

PROJECT NO.: 15535.000.000	FIGURE NO. 5
SCALE: NO SCALE	
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TABLES

Table A - Summary of Soil Gas Analytical Results

Shady View - Chino Hills, California
Sample Date: June 19, 2019

Sample	Date	Volatile Organic Compounds (VOCs) (EPA Method TO-15)																			EPA Method 8015M
		1,1-Difluoroethane (Freon 152)	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	1,3-Butadiene	4-Ethyl toluene	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon Disulfide	Chloroform	Chloro methane	Cyclo hexane	Ethyl benzene	Heptane	Hexane	m,p-Xylene	Methylene chloride	o-Xylene	Toluene	Xylenes (Total)	Methane *
		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
USEPA RSLs[1]		--	2,100	2,100	3.1	--	103,333	1,066,667	12.0	24,333	4.0	3,133	210,000	37	14,000	24,333	3,333	3,333	3,333	173,333	3,333	--
CA DTSC SLs[2]		--	--	--	2.1	--	--	--	3.1	--	--	--	--	--	--	--	--	420	--	310	--	--
Former Aboveground Storage Tanks (F-AST) Soil Gas Samples																						
F-AST SG1@5	6/19/2019	ND	**54.6**	**18.0 J**	**13.0 J**	**42.9**	**26.4**	**850**	**8.7 J**	**7.2 J**	**13.7 J**	**6.3 J**	ND	**9.9J**	ND	**240.0**	**33.1**	**ND**	**13.1 J**	**29.8**	**46.2**	ND
F-AST SG2@5	6/19/2019	ND	**8.0 J**	ND	**12.6 J**	**6.7 J**	**10.4 J**	**360**	**7.9 J**	ND	**9.0 J**	ND	ND	**7.3 J**	**9.0 J**	**9.8 J**	**20.6 J**	**8.4 J**	**7.1 J**	**26.7**	**27.7**	ND
Existing Aboveground Storage Tanks (E-AST) Soil Gas Samples																						
E-AST SG1@5	6/19/2019	ND	ND	ND	**10.8 J**	ND	**39.3 J**	**1,100**	<9.0	ND	ND	ND	**100**	ND	ND	**17.1 J**	**30.1 J**	**16.5 J**	ND	**37.5 J**	**30.1 J**	ND
E-AST SG2@5	6/19/2019	ND	**7.3 J**	ND	**6.0 J**	ND	**27.3**	**750**	**7.2 J**	**4.8 J**	ND	**2.6 J**	ND	**8.6 J**	**8.0 J**	**28.1**	**25.5 J**	**10.7 J**	**7.9 J**	**35.3**	**33.4**	ND
E-AST SG3@5	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

= Exceeds Screening Level

Notes:
'--' means no screening value exists
J = Reported value is estimated
ND = not detected
NA = not analyzed
[1] EPA Region IX Regional Screening Levels (RSLs) for indoor air (May 2019) with an attenuation factor of 0.03 for future residential land use. (THQ=1)
[2] DTSC-Modified Screening Levels DTSC-SLs for ambient air April 2019) for future residential land use.
* DTSC uses 500 ppmv methane as a trigger for further evaluation at school sites

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Table B - Summary of Soil Analytical Results

Shady View - Chino Hills, California

Sample Date: June 19, 2019

Sample ID	Date	TPH			VOCs		CAM 17 Metals									
		GRO (C6 to C12)	DRO (C13 to C28)	MORO (C29 to C40)	Methylene chloride	Others	Arsenic*	Barium	Cadmium	Chromium	Cobalt	Copper	Lead	Nickel	Vanadium	Zinc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
USEPA RSLs[1]		--	--	--	57	varies	0.68	15,000	71	--	23	3,100	80	--	390	23,000
CA DTSC HRRA SLs[2]		--	--	--	310	varies	0.41	--	--	--	--	--	80	820	--	--
CA SF RWQCB ESLs[3]		430	260	12,000	25	varies	0.26	15,000	78	--	23	3,000	80	820	390	23,000
Scrap Yard - Composite Soil Samples																
4-POINT COMP SY SS-01 - 03	6/19/2019	ND	ND	ND	ND	ND	6.91	129	11.1	18.0	10.8	26.9	29.0	19.0	35.4	308
4-POINT COMP SY SS-04 - 06	6/19/2019	ND	185	116	ND	ND	4.26	78.8	0.88	11.4	6.95	11.8	13.6	11.7	24.6	93.2
Former Aboveground Storage Tanks (F-AST) - Discrete Soil Samples																
F-AST SS-01@0	6/19/2019	ND	ND	ND	ND	ND	3.70	113	0.70	24.8	12.0	17.4	15.9	15.8	50.1	50.7
F-AST SS-01@3	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-01@8	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-02@0	6/19/2019	ND	ND	ND	ND	ND	6.34	115	0.64	21.0	10.1	13.8	8.85	14.2	43.8	41.2
F-AST SS-02@3	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-02@8	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-03@0	6/19/2019	ND	18.0	ND	ND	ND	5.29	124	0.78	26.4	11.8	17.6	9.77	15.7	51.9	52.1
F-AST SS-03@3	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-03@8	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-04@0	6/19/2019	ND	ND	ND	ND	ND	4.94	124	0.83	30.5	12.9	18.8	9.47	18.8	54.9	51.6
F-AST SS-04@3	6/19/2019	ND	58.4	67.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-04@8	6/19/2019	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-05@0	6/19/2019	ND	23.2	ND	ND	ND	5.39	119	0.72	24.4	12.4	16.4	11.4	17.7	49.4	48.2
F-AST SS-05@3	6/19/2019	ND	62.8	64.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-AST SS-05@8	6/19/2019	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Existing Aboveground Storage Tanks (E-AST) - Discrete Soil Samples																
E-AST SS-01@0	6/19/2019	ND	2,200	ND	0.007	ND	4.1	47.9	0.52	9.23	5.56	8.48	14.5	16.6	19.9	33.6
E-AST SS-01@3	6/19/2019	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-01@8	6/19/2019	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-02@0	6/19/2019	ND	350	ND	0.0053	ND	2.92	69.9	0.56	11.8	6.49	9.57	7.26	11.4	24.9	36.1
E-AST SS-02@3	6/19/2019	ND	207	183	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-02@8	6/19/2019	ND	287	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-03@0	6/19/2019	ND	ND	ND	ND	ND	2.32	59.1	0.62	10.5	7.62	10.1	3.22	10.2	24.3	29.8
E-AST SS-03@3	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-03@8	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-04@0	6/19/2019	ND	61.1	ND	0.005	ND	3.56	78.7	0.78	13.4	6.96	10.9	16.8	12.1	26.4	51
E-AST SS-04@3	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E-AST SS-04@8	6/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Exceeds screening level

Exceeds screening level, but within background arsenic soil concentration in soil

ND = not detected

NA = not analyzed

* = Department of Toxic Substances Control (DTSC) Determination of a Southern California Background Arsenic Concentration in Soil, March 2008

'--' means no screening value exists

[1] EPA Region 9 Regional Screening Levels (RSLs) for residential soil (May 2019). (THQ=1)

[2] DTSC-Modified Screening Levels DTSC-SLs for April 2019 for future residential land use.

[3] SF Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs), Direct Exposure Human Health Risk for future residential land use, January 20109 (Revision 1).

APPENDIX A

Laboratory Analytical Reports

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: ENGEO Inc.
Address: 6 Morgan, Suite 162
Irvine, CA 92618-1922

Attn: Adrianna Lundberg

Comments: Shady View
15535.000.000

Lab Request: 416459
Report Date: 07/08/2019
Date Received: 06/19/2019
Client ID: 15790

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
416459-001	F-AST SG1@5
416459-002	F-AST SG2@5
416459-003	E-AST SG1@5
416459-004	E-AST SG2@5

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Diane M. Galvan

Report Review performed by: Diane Galvan, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

Detections Summary

Sample #: 416459-001 **Client Sample #:** F-AST SG1@5

Method	Analyte	Result	DF	MDL	RDL	Units	Notes
EPA TO-15	1,2,4-Trimethylbenzene	54.6	7.5	7.5	36.75	ug/m3	
EPA TO-15	1,3,5-Trimethylbenzene	18.0 J	7.5	7.5	36.75	ug/m3	
EPA TO-15	1,3-Butadiene	13.0 J	7.5	3	16.5	ug/m3	
EPA TO-15	4-Ethyltoluene	42.9	7.5	7.5	36.75	ug/m3	
EPA TO-15	4-Methyl-2-pentanone (MIBK)	26.4 J	7.5	6	30.75	ug/m3	
EPA TO-15	Acetone	850	7.5	44.25	90	ug/m3	
EPA TO-15	Benzene	8.7 J	7.5	4.5	24	ug/m3	
EPA TO-15	Carbon disulfide	7.2 J	7.5	4.5	23.25	ug/m3	
EPA TO-15	Chloroform	13.7 J	7.5	7.5	36.75	ug/m3	
EPA TO-15	Chloromethane	6.3 J	7.5	3	15.75	ug/m3	
EPA TO-15	Ethylbenzene	9.9 J	7.5	6.75	32.25	ug/m3	
EPA TO-15	Hexane	240	7.5	5.25	26.25	ug/m3	
EPA TO-15	m and p-Xylene	33.1	7.5	6.75	32.25	ug/m3	
EPA TO-15	o-Xylene	13.1 J	7.5	6.75	32.25	ug/m3	
EPA TO-15	Toluene	29.8	7.5	6	28.5	ug/m3	
EPA TO-15	Xylenes (Total)	46.2	7.5	6.75	32.25	ug/m3	

Sample #: 416459-002 **Client Sample #:** F-AST SG2@5

Method	Analyte	Result	DF	MDL	RDL	Units	Notes
EPA TO-15	1,2,4-Trimethylbenzene	8.0 J	6	6	29.4	ug/m3	
EPA TO-15	1,3-Butadiene	12.6 J	6	2.4	13.2	ug/m3	
EPA TO-15	4-Ethyltoluene	6.7 J	6	6	29.4	ug/m3	
EPA TO-15	4-Methyl-2-pentanone (MIBK)	10.4 J	6	4.8	24.6	ug/m3	
EPA TO-15	Acetone	360	6	35.4	72	ug/m3	
EPA TO-15	Benzene	7.9 J	6	3.6	19.2	ug/m3	
EPA TO-15	Chloroform	9.0 J	6	6	29.4	ug/m3	
EPA TO-15	Ethylbenzene	7.3 J	6	5.4	25.8	ug/m3	
EPA TO-15	Heptane	9.0 J	6	4.8	24.6	ug/m3	
EPA TO-15	Hexane	9.8 J	6	4.2	21	ug/m3	
EPA TO-15	m and p-Xylene	20.6 J	6	5.4	25.8	ug/m3	
EPA TO-15	Methylene chloride	8.4 J	6	4.2	21	ug/m3	
EPA TO-15	o-Xylene	7.1 J	6	5.4	25.8	ug/m3	
EPA TO-15	Toluene	26.7	6	4.8	22.8	ug/m3	
EPA TO-15	Xylenes (Total)	27.7	6	5.4	25.8	ug/m3	

Sample #: 416459-003 **Client Sample #:** E-AST SG1@5

Method	Analyte	Result	DF	MDL	RDL	Units	Notes
EPA TO-15	1,3-Butadiene	10.8 J	15	6	33	ug/m3	
EPA TO-15	4-Methyl-2-pentanone (MIBK)	39.3 J	15	12	61.5	ug/m3	
EPA TO-15	Acetone	1100	15	88.5	180	ug/m3	
EPA TO-15	Cyclohexane	100	15	10.5	51	ug/m3	
EPA TO-15	Hexane	17.1 J	15	10.5	52.5	ug/m3	
EPA TO-15	m and p-Xylene	30.1 J	15	13.5	64.5	ug/m3	
EPA TO-15	Methylene chloride	16.5 J	15	10.5	52.5	ug/m3	
EPA TO-15	Toluene	37.5 J	15	12	57	ug/m3	
EPA TO-15	Xylenes (Total)	30.1 J	15	13.5	64.5	ug/m3	

Sample #: 416459-004 **Client Sample #:** E-AST SG2@5

Method	Analyte	Result	DF	MDL	RDL	Units	Notes
EPA TO-15	1,2,4-Trimethylbenzene	7.3 J	6	6	29.4	ug/m3	
EPA TO-15	1,3-Butadiene	6.0 J	6	2.4	13.2	ug/m3	
EPA TO-15	4-Methyl-2-pentanone (MIBK)	27.3	6	4.8	24.6	ug/m3	
EPA TO-15	Acetone	750	6	35.4	72	ug/m3	

Detections Summary

Sample #: **416459-004** **Client Sample #:** E-AST SG2@5

Method	Analyte	Result	DF	MDL	RDL	Units	Notes
EPA TO-15	Benzene	7.2 J	6	3.6	19.2	ug/m3	
EPA TO-15	Carbon disulfide	4.8 J	6	3.6	18.6	ug/m3	
EPA TO-15	Chloromethane	2.6 J	6	2.4	12.6	ug/m3	
EPA TO-15	Ethylbenzene	8.6 J	6	5.4	25.8	ug/m3	
EPA TO-15	Heptane	8.0 J	6	4.8	24.6	ug/m3	
EPA TO-15	Hexane	28.1	6	4.2	21	ug/m3	
EPA TO-15	m and p-Xylene	25.5 J	6	5.4	25.8	ug/m3	
EPA TO-15	Methylene chloride	10.7 J	6	4.2	21	ug/m3	
EPA TO-15	o-Xylene	7.9 J	6	5.4	25.8	ug/m3	
EPA TO-15	Toluene	35.3	6	4.8	22.8	ug/m3	
EPA TO-15	Xylenes (Total)	33.4	6	5.4	25.8	ug/m3	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 13:39	**Site:**			
Sample #:	**416459-001**	**Client Sample #:**	F-AST SG1@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M Prep Method: RSK-175							QCBatchID: QC1203659		
Methane ug/M3	ND	1.5	49200	49200	ug/m3		06/27/19 10:24	EW	
Method: EPA TO-15 Prep Method: Method							QCBatchID: QC1203510		
1,1,1-Trichloroethane	ND	7.5	8.25	41.25	ug/m3		06/25/19 09:35	ZZ	
1,1,2,2-Tetrachloroethane	ND	7.5	10.5	51.75	ug/m3		06/25/19 09:35	ZZ	
1,1,2-Trichloroethane	ND	7.5	8.25	41.25	ug/m3		06/25/19 09:35	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	7.5	11.25	57.75	ug/m3		06/25/19 09:35	ZZ	
1,1-Dichloroethane	ND	7.5	6	30	ug/m3		06/25/19 09:35	ZZ	
1,1-Dichloroethene	ND	7.5	6	30	ug/m3		06/25/19 09:35	ZZ	
1,1-Difluoroethane	ND	7.5	20.25	20.25	ug/m3		06/25/19 09:35	ZZ	
1,2,4-Trichlorobenzene	ND	7.5	11.25	55.5	ug/m3		06/25/19 09:35	ZZ	
1,2,4-Trimethylbenzene	**54.6**	7.5	7.5	36.75	ug/m3		06/25/19 09:35	ZZ	
1,2-Dibromoethane	ND	7.5	11.25	57.75	ug/m3		06/25/19 09:35	ZZ	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.5	10.5	52.5	ug/m3		06/25/19 09:35	ZZ	
1,2-Dichlorobenzene	ND	7.5	9	45	ug/m3		06/25/19 09:35	ZZ	
1,2-Dichloroethane	ND	7.5	6	30	ug/m3		06/25/19 09:35	ZZ	
1,2-Dichloropropane	ND	7.5	6.75	34.5	ug/m3		06/25/19 09:35	ZZ	
1,3,5-Trimethylbenzene	**18.0 J**	7.5	7.5	36.75	ug/m3		06/25/19 09:35	ZZ	
1,3-Butadiene	**13.0 J**	7.5	3	16.5	ug/m3		06/25/19 09:35	ZZ	
1,3-Dichlorobenzene	ND	7.5	9	45	ug/m3		06/25/19 09:35	ZZ	
1,4-Dichlorobenzene	ND	7.5	9	45	ug/m3		06/25/19 09:35	ZZ	
1,4-Dioxane	ND	7.5	27	135	ug/m3		06/25/19 09:35	ZZ	
2-Butanone (MEK)	ND	7.5	55.5	112.5	ug/m3		06/25/19 09:35	ZZ	
2-Hexanone	ND	7.5	30.75	150	ug/m3		06/25/19 09:35	ZZ	
4-Ethyltoluene	**42.9**	7.5	7.5	36.75	ug/m3		06/25/19 09:35	ZZ	
4-Methyl-2-pentanone (MIBK)	**26.4 J**	7.5	6	30.75	ug/m3		06/25/19 09:35	ZZ	
Acetone	**850**	7.5	44.25	90	ug/m3		06/25/19 09:35	ZZ	
Benzene	**8.7 J**	7.5	4.5	24	ug/m3		06/25/19 09:35	ZZ	
Benzyl Chloride	ND	7.5	7.5	39	ug/m3		06/25/19 09:35	ZZ	
Bromodichloromethane	ND	7.5	9.75	50.25	ug/m3		06/25/19 09:35	ZZ	
Bromoform	ND	7.5	15.75	75	ug/m3		06/25/19 09:35	ZZ	
Bromomethane	ND	7.5	6	29.25	ug/m3		06/25/19 09:35	ZZ	
Carbon disulfide	**7.2 J**	7.5	4.5	23.25	ug/m3		06/25/19 09:35	ZZ	
Carbon Tetrachloride	ND	7.5	9	47.25	ug/m3		06/25/19 09:35	ZZ	
Chlorobenzene	ND	7.5	6.75	34.5	ug/m3		06/25/19 09:35	ZZ	
Chlorodibromomethane	ND	7.5	12.75	63.75	ug/m3		06/25/19 09:35	ZZ	
Chloroethane	ND	7.5	3.75	19.5	ug/m3		06/25/19 09:35	ZZ	
Chloroform	**13.7 J**	7.5	7.5	36.75	ug/m3		06/25/19 09:35	ZZ	
Chloromethane	**6.3 J**	7.5	3	15.75	ug/m3		06/25/19 09:35	ZZ	
cis-1,2-Dichloroethene	ND	7.5	6	30	ug/m3		06/25/19 09:35	ZZ	
cis-1,3-dichloropropene	ND	7.5	6.75	33.75	ug/m3		06/25/19 09:35	ZZ	
Cyclohexane	ND	7.5	5.25	25.5	ug/m3		06/25/19 09:35	ZZ	
Dichlorodifluoromethane	ND	7.5	7.5	36.75	ug/m3		06/25/19 09:35	ZZ	
Ethyl Acetate	ND	7.5	67.5	135	ug/m3		06/25/19 09:35	ZZ	
Ethylbenzene	**9.9 J**	7.5	6.75	32.25	ug/m3		06/25/19 09:35	ZZ	
Heptane	ND	7.5	6	30.75	ug/m3		06/25/19 09:35	ZZ	
Hexachlorobutadiene	ND	7.5	15.75	82.5	ug/m3		06/25/19 09:35	ZZ	
Hexane	**240**	7.5	5.25	26.25	ug/m3		06/25/19 09:35	ZZ	
Isopropyl alcohol (IPA)	ND	7.5	45.75	90	ug/m3		06/25/19 09:35	ZZ	
m and p-Xylene	**33.1**	7.5	6.75	32.25	ug/m3		06/25/19 09:35	ZZ	
Methylene chloride	ND	7.5	5.25	26.25	ug/m3		06/25/19 09:35	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	7.5	5.25	27	ug/m3		06/25/19 09:35	ZZ	
o-Xylene	**13.1 J**	7.5	6.75	32.25	ug/m3		06/25/19 09:35	ZZ	
Propene	ND	7.5	2.25	12.75	ug/m3		06/25/19 09:35	ZZ	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 13:39	**Site:**			
Sample #:	**416459-001**	**Client Sample #:**	F-AST SG1@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Styrene	ND	7.5	7.5	31.5	ug/m3		06/25/19 09:35	ZZ	
Tetrachloroethene	ND	7.5	10.5	51	ug/m3		06/25/19 09:35	ZZ	
Toluene	**29.8**	7.5	6	28.5	ug/m3		06/25/19 09:35	ZZ	
trans-1,2-dichloroethene	ND	7.5	6	30	ug/m3		06/25/19 09:35	ZZ	
trans-1,3-dichloropropene	ND	7.5	6.75	33.75	ug/m3		06/25/19 09:35	ZZ	
Trichloroethene	ND	7.5	8.25	40.5	ug/m3		06/25/19 09:35	ZZ	
Trichlorofluoromethane	ND	7.5	8.25	42	ug/m3		06/25/19 09:35	ZZ	
Vinyl acetate	ND	7.5	5.25	26.25	ug/m3		06/25/19 09:35	ZZ	
Vinyl Chloride	ND	7.5	3.75	19.5	ug/m3		06/25/19 09:35	ZZ	
Xylenes (Total)	**46.2**	7.5	6.75	32.25	ug/m3		06/25/19 09:35	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*87*	*60-140*	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 14:08	**Site:**			
Sample #:	**416459-002**	**Client Sample #:**	F-AST SG2@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M	Prep Method: RSK-175						QCBatchID: QC1203659		
Methane ug/M3	ND	1.5	49200	49200	ug/m3		06/27/19 10:36	EW	
Method: EPA TO-15	Prep Method: Method						QCBatchID: QC1203510		
1,1,1-Trichloroethane	ND	6	6.6	33	ug/m3		06/25/19 10:20	ZZ	
1,1,2,2-Tetrachloroethane	ND	6	8.4	41.4	ug/m3		06/25/19 10:20	ZZ	
1,1,2-Trichloroethane	ND	6	6.6	33	ug/m3		06/25/19 10:20	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	6	9	46.2	ug/m3		06/25/19 10:20	ZZ	
1,1-Dichloroethane	ND	6	4.8	24	ug/m3		06/25/19 10:20	ZZ	
1,1-Dichloroethene	ND	6	4.8	24	ug/m3		06/25/19 10:20	ZZ	
1,1-Difluoroethane	ND	6	16.2	16.2	ug/m3		06/25/19 10:20	ZZ	
1,2,4-Trichlorobenzene	ND	6	9	44.4	ug/m3		06/25/19 10:20	ZZ	
1,2,4-Trimethylbenzene	**8.0 J**	6	6	29.4	ug/m3		06/25/19 10:20	ZZ	
1,2-Dibromoethane	ND	6	9	46.2	ug/m3		06/25/19 10:20	ZZ	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6	8.4	42	ug/m3		06/25/19 10:20	ZZ	
1,2-Dichlorobenzene	ND	6	7.2	36	ug/m3		06/25/19 10:20	ZZ	
1,2-Dichloroethane	ND	6	4.8	24	ug/m3		06/25/19 10:20	ZZ	
1,2-Dichloropropane	ND	6	5.4	27.6	ug/m3		06/25/19 10:20	ZZ	
1,3,5-Trimethylbenzene	ND	6	6	29.4	ug/m3		06/25/19 10:20	ZZ	
1,3-Butadiene	**12.6 J**	6	2.4	13.2	ug/m3		06/25/19 10:20	ZZ	
1,3-Dichlorobenzene	ND	6	7.2	36	ug/m3		06/25/19 10:20	ZZ	
1,4-Dichlorobenzene	ND	6	7.2	36	ug/m3		06/25/19 10:20	ZZ	
1,4-Dioxane	ND	6	21.6	108	ug/m3		06/25/19 10:20	ZZ	
2-Butanone (MEK)	ND	6	44.4	90	ug/m3		06/25/19 10:20	ZZ	
2-Hexanone	ND	6	24.6	120	ug/m3		06/25/19 10:20	ZZ	
4-Ethyltoluene	**6.7 J**	6	6	29.4	ug/m3		06/25/19 10:20	ZZ	
4-Methyl-2-pentanone (MIBK)	**10.4 J**	6	4.8	24.6	ug/m3		06/25/19 10:20	ZZ	
Acetone	**360**	6	35.4	72	ug/m3		06/25/19 10:20	ZZ	
Benzene	**7.9 J**	6	3.6	19.2	ug/m3		06/25/19 10:20	ZZ	
Benzyl Chloride	ND	6	6	31.2	ug/m3		06/25/19 10:20	ZZ	
Bromodichloromethane	ND	6	7.8	40.2	ug/m3		06/25/19 10:20	ZZ	
Bromoform	ND	6	12.6	60	ug/m3		06/25/19 10:20	ZZ	
Bromomethane	ND	6	4.8	23.4	ug/m3		06/25/19 10:20	ZZ	
Carbon disulfide	ND	6	3.6	18.6	ug/m3		06/25/19 10:20	ZZ	
Carbon Tetrachloride	ND	6	7.2	37.8	ug/m3		06/25/19 10:20	ZZ	
Chlorobenzene	ND	6	5.4	27.6	ug/m3		06/25/19 10:20	ZZ	
Chlorodibromomethane	ND	6	10.2	51	ug/m3		06/25/19 10:20	ZZ	
Chloroethane	ND	6	3	15.6	ug/m3		06/25/19 10:20	ZZ	
Chloroform	**9.0 J**	6	6	29.4	ug/m3		06/25/19 10:20	ZZ	
Chloromethane	ND	6	2.4	12.6	ug/m3		06/25/19 10:20	ZZ	
cis-1,2-Dichloroethene	ND	6	4.8	24	ug/m3		06/25/19 10:20	ZZ	
cis-1,3-dichloropropene	ND	6	5.4	27	ug/m3		06/25/19 10:20	ZZ	
Cyclohexane	ND	6	4.2	20.4	ug/m3		06/25/19 10:20	ZZ	
Dichlorodifluoromethane	ND	6	6	29.4	ug/m3		06/25/19 10:20	ZZ	
Ethyl Acetate	ND	6	54	108	ug/m3		06/25/19 10:20	ZZ	
Ethylbenzene	**7.3 J**	6	5.4	25.8	ug/m3		06/25/19 10:20	ZZ	
Heptane	**9.0 J**	6	4.8	24.6	ug/m3		06/25/19 10:20	ZZ	
Hexachlorobutadiene	ND	6	12.6	66	ug/m3		06/25/19 10:20	ZZ	
Hexane	**9.8 J**	6	4.2	21	ug/m3		06/25/19 10:20	ZZ	
Isopropyl alcohol (IPA)	ND	6	36.6	72	ug/m3		06/25/19 10:20	ZZ	
m and p-Xylene	**20.6 J**	6	5.4	25.8	ug/m3		06/25/19 10:20	ZZ	
Methylene chloride	**8.4 J**	6	4.2	21	ug/m3		06/25/19 10:20	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	6	4.2	21.6	ug/m3		06/25/19 10:20	ZZ	
o-Xylene	**7.1 J**	6	5.4	25.8	ug/m3		06/25/19 10:20	ZZ	
Propene	ND	6	1.8	10.2	ug/m3		06/25/19 10:20	ZZ	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 14:08	**Site:**			
Sample #:	**416459-002**	**Client Sample #:**	F-AST SG2@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Styrene	ND	6	6	25.2	ug/m3		06/25/19 10:20	ZZ	
Tetrachloroethene	ND	6	8.4	40.8	ug/m3		06/25/19 10:20	ZZ	
Toluene	**26.7**	6	4.8	22.8	ug/m3		06/25/19 10:20	ZZ	
trans-1,2-dichloroethene	ND	6	4.8	24	ug/m3		06/25/19 10:20	ZZ	
trans-1,3-dichloropropene	ND	6	5.4	27	ug/m3		06/25/19 10:20	ZZ	
Trichloroethene	ND	6	6.6	32.4	ug/m3		06/25/19 10:20	ZZ	
Trichlorofluoromethane	ND	6	6.6	33.6	ug/m3		06/25/19 10:20	ZZ	
Vinyl acetate	ND	6	4.2	21	ug/m3		06/25/19 10:20	ZZ	
Vinyl Chloride	ND	6	3	15.6	ug/m3		06/25/19 10:20	ZZ	
Xylenes (Total)	**27.7**	6	5.4	25.8	ug/m3		06/25/19 10:20	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*95*	*60-140*	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 11:44	**Site:**			
Sample #:	**416459-003**	**Client Sample #:**	E-AST SG1@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M	Prep Method: RSK-175						QCBatchID: QC1203659		
Methane ug/M3	ND	1.5	49200	49200	ug/m3		06/27/19 11:10	EW	
Method: EPA TO-15	Prep Method: Method						QCBatchID: QC1203510		
1,1,1-Trichloroethane	ND	15	16.5	82.5	ug/m3		06/24/19 19:29	ZZ	
1,1,2,2-Tetrachloroethane	ND	15	21	103.5	ug/m3		06/24/19 19:29	ZZ	
1,1,2-Trichloroethane	ND	15	16.5	82.5	ug/m3		06/24/19 19:29	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	15	22.5	115.5	ug/m3		06/24/19 19:29	ZZ	
1,1-Dichloroethane	ND	15	12	60	ug/m3		06/24/19 19:29	ZZ	
1,1-Dichloroethene	ND	15	12	60	ug/m3		06/24/19 19:29	ZZ	
1,1-Difluoroethane	ND	15	40.5	40.5	ug/m3		06/24/19 19:29	ZZ	
1,2,4-Trichlorobenzene	ND	15	22.5	111	ug/m3		06/24/19 19:29	ZZ	
1,2,4-Trimethylbenzene	ND	15	15	73.5	ug/m3		06/24/19 19:29	ZZ	
1,2-Dibromoethane	ND	15	22.5	115.5	ug/m3		06/24/19 19:29	ZZ	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	15	21	105	ug/m3		06/24/19 19:29	ZZ	
1,2-Dichlorobenzene	ND	15	18	90	ug/m3		06/24/19 19:29	ZZ	
1,2-Dichloroethane	ND	15	12	60	ug/m3		06/24/19 19:29	ZZ	
1,2-Dichloropropane	ND	15	13.5	69	ug/m3		06/24/19 19:29	ZZ	
1,3,5-Trimethylbenzene	ND	15	15	73.5	ug/m3		06/24/19 19:29	ZZ	
1,3-Butadiene	**10.8 J**	15	6	33	ug/m3		06/24/19 19:29	ZZ	
1,3-Dichlorobenzene	ND	15	18	90	ug/m3		06/24/19 19:29	ZZ	
1,4-Dichlorobenzene	ND	15	18	90	ug/m3		06/24/19 19:29	ZZ	
1,4-Dioxane	ND	15	54	270	ug/m3		06/24/19 19:29	ZZ	
2-Butanone (MEK)	ND	15	111	225	ug/m3		06/24/19 19:29	ZZ	
2-Hexanone	ND	15	61.5	300	ug/m3		06/24/19 19:29	ZZ	
4-Ethyltoluene	ND	15	15	73.5	ug/m3		06/24/19 19:29	ZZ	
4-Methyl-2-pentanone (MIBK)	**39.3 J**	15	12	61.5	ug/m3		06/24/19 19:29	ZZ	
Acetone	**1100**	15	88.5	180	ug/m3		06/24/19 19:29	ZZ	
Benzene	ND	15	9	48	ug/m3		06/24/19 19:29	ZZ	
Benzyl Chloride	ND	15	15	78	ug/m3		06/24/19 19:29	ZZ	
Bromodichloromethane	ND	15	19.5	100.5	ug/m3		06/24/19 19:29	ZZ	
Bromoform	ND	15	31.5	150	ug/m3		06/24/19 19:29	ZZ	
Bromomethane	ND	15	12	58.5	ug/m3		06/24/19 19:29	ZZ	
Carbon disulfide	ND	15	9	46.5	ug/m3		06/24/19 19:29	ZZ	
Carbon Tetrachloride	ND	15	18	94.5	ug/m3		06/24/19 19:29	ZZ	
Chlorobenzene	ND	15	13.5	69	ug/m3		06/24/19 19:29	ZZ	
Chlorodibromomethane	ND	15	25.5	127.5	ug/m3		06/24/19 19:29	ZZ	
Chloroethane	ND	15	7.5	39	ug/m3		06/24/19 19:29	ZZ	
Chloroform	ND	15	15	73.5	ug/m3		06/24/19 19:29	ZZ	
Chloromethane	ND	15	6	31.5	ug/m3		06/24/19 19:29	ZZ	
cis-1,2-Dichloroethene	ND	15	12	60	ug/m3		06/24/19 19:29	ZZ	
cis-1,3-dichloropropene	ND	15	13.5	67.5	ug/m3		06/24/19 19:29	ZZ	
Cyclohexane	**100**	15	10.5	51	ug/m3		06/24/19 19:29	ZZ	
Dichlorodifluoromethane	ND	15	15	73.5	ug/m3		06/24/19 19:29	ZZ	
Ethyl Acetate	ND	15	135	270	ug/m3		06/24/19 19:29	ZZ	
Ethylbenzene	ND	15	13.5	64.5	ug/m3		06/24/19 19:29	ZZ	
Heptane	ND	15	12	61.5	ug/m3		06/24/19 19:29	ZZ	
Hexachlorobutadiene	ND	15	31.5	165	ug/m3		06/24/19 19:29	ZZ	
Hexane	**17.1 J**	15	10.5	52.5	ug/m3		06/24/19 19:29	ZZ	
Isopropyl alcohol (IPA)	ND	15	91.5	180	ug/m3		06/24/19 19:29	ZZ	
m and p-Xylene	**30.1 J**	15	13.5	64.5	ug/m3		06/24/19 19:29	ZZ	
Methylene chloride	**16.5 J**	15	10.5	52.5	ug/m3		06/24/19 19:29	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	15	10.5	54	ug/m3		06/24/19 19:29	ZZ	
o-Xylene	ND	15	13.5	64.5	ug/m3		06/24/19 19:29	ZZ	
Propene	ND	15	4.5	25.5	ug/m3		06/24/19 19:29	ZZ	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 11:44	**Site:**			
Sample #:	**416459-003**	**Client Sample #:**	E-AST SG1@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Styrene	ND	15	15	63	ug/m3		06/24/19 19:29	ZZ	
Tetrachloroethene	ND	15	21	102	ug/m3		06/24/19 19:29	ZZ	
Toluene	**37.5 J**	15	12	57	ug/m3		06/24/19 19:29	ZZ	
trans-1,2-dichloroethene	ND	15	12	60	ug/m3		06/24/19 19:29	ZZ	
trans-1,3-dichloropropene	ND	15	13.5	67.5	ug/m3		06/24/19 19:29	ZZ	
Trichloroethene	ND	15	16.5	81	ug/m3		06/24/19 19:29	ZZ	
Trichlorofluoromethane	ND	15	16.5	84	ug/m3		06/24/19 19:29	ZZ	
Vinyl acetate	ND	15	10.5	52.5	ug/m3		06/24/19 19:29	ZZ	
Vinyl Chloride	ND	15	7.5	39	ug/m3		06/24/19 19:29	ZZ	
Xylenes (Total)	**30.1 J**	15	13.5	64.5	ug/m3		06/24/19 19:29	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*100*	*60-140*	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 12:08	**Site:**			
Sample #:	**416459-004**	**Client Sample #:**	E-AST SG2@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M	Prep Method: RSK-175						QCBatchID: QC1203659		
Methane ug/M3	ND	1.5	49200	49200	ug/m3		06/27/19 11:21	EW	
Method: EPA TO-15	Prep Method: Method						QCBatchID: QC1203510		
1,1,1-Trichloroethane	ND	6	6.6	33	ug/m3		06/25/19 11:02	ZZ	
1,1,2,2-Tetrachloroethane	ND	6	8.4	41.4	ug/m3		06/25/19 11:02	ZZ	
1,1,2-Trichloroethane	ND	6	6.6	33	ug/m3		06/25/19 11:02	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	6	9	46.2	ug/m3		06/25/19 11:02	ZZ	
1,1-Dichloroethane	ND	6	4.8	24	ug/m3		06/25/19 11:02	ZZ	
1,1-Dichloroethene	ND	6	4.8	24	ug/m3		06/25/19 11:02	ZZ	
1,1-Difluoroethane	ND	6	16.2	16.2	ug/m3		06/25/19 11:02	ZZ	
1,2,4-Trichlorobenzene	ND	6	9	44.4	ug/m3		06/25/19 11:02	ZZ	
1,2,4-Trimethylbenzene	**7.3 J**	6	6	29.4	ug/m3		06/25/19 11:02	ZZ	
1,2-Dibromoethane	ND	6	9	46.2	ug/m3		06/25/19 11:02	ZZ	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6	8.4	42	ug/m3		06/25/19 11:02	ZZ	
1,2-Dichlorobenzene	ND	6	7.2	36	ug/m3		06/25/19 11:02	ZZ	
1,2-Dichloroethane	ND	6	4.8	24	ug/m3		06/25/19 11:02	ZZ	
1,2-Dichloropropane	ND	6	5.4	27.6	ug/m3		06/25/19 11:02	ZZ	
1,3,5-Trimethylbenzene	ND	6	6	29.4	ug/m3		06/25/19 11:02	ZZ	
1,3-Butadiene	**6.0 J**	6	2.4	13.2	ug/m3		06/25/19 11:02	ZZ	
1,3-Dichlorobenzene	ND	6	7.2	36	ug/m3		06/25/19 11:02	ZZ	
1,4-Dichlorobenzene	ND	6	7.2	36	ug/m3		06/25/19 11:02	ZZ	
1,4-Dioxane	ND	6	21.6	108	ug/m3		06/25/19 11:02	ZZ	
2-Butanone (MEK)	ND	6	44.4	90	ug/m3		06/25/19 11:02	ZZ	
2-Hexanone	ND	6	24.6	120	ug/m3		06/25/19 11:02	ZZ	
4-Ethyltoluene	ND	6	6	29.4	ug/m3		06/25/19 11:02	ZZ	
4-Methyl-2-pentanone (MIBK)	**27.3**	6	4.8	24.6	ug/m3		06/25/19 11:02	ZZ	
Acetone	**750**	6	35.4	72	ug/m3		06/25/19 11:02	ZZ	
Benzene	**7.2 J**	6	3.6	19.2	ug/m3		06/25/19 11:02	ZZ	
Benzyl Chloride	ND	6	6	31.2	ug/m3		06/25/19 11:02	ZZ	
Bromodichloromethane	ND	6	7.8	40.2	ug/m3		06/25/19 11:02	ZZ	
Bromoform	ND	6	12.6	60	ug/m3		06/25/19 11:02	ZZ	
Bromomethane	ND	6	4.8	23.4	ug/m3		06/25/19 11:02	ZZ	
Carbon disulfide	**4.8 J**	6	3.6	18.6	ug/m3		06/25/19 11:02	ZZ	
Carbon Tetrachloride	ND	6	7.2	37.8	ug/m3		06/25/19 11:02	ZZ	
Chlorobenzene	ND	6	5.4	27.6	ug/m3		06/25/19 11:02	ZZ	
Chlorodibromomethane	ND	6	10.2	51	ug/m3		06/25/19 11:02	ZZ	
Chloroethane	ND	6	3	15.6	ug/m3		06/25/19 11:02	ZZ	
Chloroform	ND	6	6	29.4	ug/m3		06/25/19 11:02	ZZ	
Chloromethane	**2.6 J**	6	2.4	12.6	ug/m3		06/25/19 11:02	ZZ	
cis-1,2-Dichloroethene	ND	6	4.8	24	ug/m3		06/25/19 11:02	ZZ	
cis-1,3-dichloropropene	ND	6	5.4	27	ug/m3		06/25/19 11:02	ZZ	
Cyclohexane	ND	6	4.2	20.4	ug/m3		06/25/19 11:02	ZZ	
Dichlorodifluoromethane	ND	6	6	29.4	ug/m3		06/25/19 11:02	ZZ	
Ethyl Acetate	ND	6	54	108	ug/m3		06/25/19 11:02	ZZ	
Ethylbenzene	**8.6 J**	6	5.4	25.8	ug/m3		06/25/19 11:02	ZZ	
Heptane	**8.0 J**	6	4.8	24.6	ug/m3		06/25/19 11:02	ZZ	
Hexachlorobutadiene	ND	6	12.6	66	ug/m3		06/25/19 11:02	ZZ	
Hexane	**28.1**	6	4.2	21	ug/m3		06/25/19 11:02	ZZ	
Isopropyl alcohol (IPA)	ND	6	36.6	72	ug/m3		06/25/19 11:02	ZZ	
m and p-Xylene	**25.5 J**	6	5.4	25.8	ug/m3		06/25/19 11:02	ZZ	
Methylene chloride	**10.7 J**	6	4.2	21	ug/m3		06/25/19 11:02	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	6	4.2	21.6	ug/m3		06/25/19 11:02	ZZ	
o-Xylene	**7.9 J**	6	5.4	25.8	ug/m3		06/25/19 11:02	ZZ	
Propene	ND	6	1.8	10.2	ug/m3		06/25/19 11:02	ZZ	

Matrix:	Air	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 12:08	**Site:**			
Sample #:	**416459-004**	**Client Sample #:**	E-AST SG2@5	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Styrene	ND	6	6	25.2	ug/m3		06/25/19 11:02	ZZ	
Tetrachloroethene	ND	6	8.4	40.8	ug/m3		06/25/19 11:02	ZZ	
Toluene	**35.3**	6	4.8	22.8	ug/m3		06/25/19 11:02	ZZ	
trans-1,2-dichloroethene	ND	6	4.8	24	ug/m3		06/25/19 11:02	ZZ	
trans-1,3-dichloropropene	ND	6	5.4	27	ug/m3		06/25/19 11:02	ZZ	
Trichloroethene	ND	6	6.6	32.4	ug/m3		06/25/19 11:02	ZZ	
Trichlorofluoromethane	ND	6	6.6	33.6	ug/m3		06/25/19 11:02	ZZ	
Vinyl acetate	ND	6	4.2	21	ug/m3		06/25/19 11:02	ZZ	
Vinyl Chloride	ND	6	3	15.6	ug/m3		06/25/19 11:02	ZZ	
Xylenes (Total)	**33.4**	6	5.4	25.8	ug/m3		06/25/19 11:02	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*88*	*60-140*	

QCBatchID: QC1203510	**Analyst:** nicollez		**Method:** EPA TO-15		
Matrix: Air	**Analyzed:** 06/24/2019		**Instrument:** VOA-MS (group)		

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1203510MB1					
1,1,1-Trichloroethane	ND	ug/m3	1.1	5.5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.4	6.9	
1,1,2-Trichloroethane	ND	ug/m3	1.1	5.5	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.5	7.7	
1,1-Dichloroethane	ND	ug/m3	0.8	4	
1,1-Dichloroethene	ND	ug/m3	0.8	4	
1,1-Difluoroethane	ND	ug/m3	2.7	2.7	
1,2,4-Trichlorobenzene	ND	ug/m3	1.5	7.4	
1,2,4-Trimethylbenzene	ND	ug/m3	1	4.9	
1,2-Dibromoethane	ND	ug/m3	1.5	7.7	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ug/m3	1.4	7	
1,2-Dichlorobenzene	ND	ug/m3	1.2	6	
1,2-Dichloroethane	ND	ug/m3	0.8	4	
1,2-Dichloropropane	ND	ug/m3	0.9	4.6	
1,3,5-Trimethylbenzene	ND	ug/m3	1	4.9	
1,3-Butadiene	ND	ug/m3	0.4	2.2	
1,3-Dichlorobenzene	ND	ug/m3	1.2	6	
1,4-Dichlorobenzene	ND	ug/m3	1.2	6	
1,4-Dioxane	ND	ug/m3	3.6	18	
2-Butanone (MEK)	ND	ug/m3	7.4	15	
2-Hexanone	ND	ug/m3	4.1	20	
4-Ethyltoluene	ND	ug/m3	1	4.9	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	0.8	4.1	
Acetone	ND	ug/m3	5.9	12	
Benzene	ND	ug/m3	0.6	3.2	
Benzyl Chloride	ND	ug/m3	1	5.2	
Bromodichloromethane	ND	ug/m3	1.3	6.7	
Bromoform	ND	ug/m3	2.1	10	
Bromomethane	ND	ug/m3	0.8	3.9	
Carbon disulfide	ND	ug/m3	0.6	3.1	
Carbon Tetrachloride	ND	ug/m3	1.2	6.3	
Chlorobenzene	ND	ug/m3	0.9	4.6	
Chlorodibromomethane	ND	ug/m3	1.7	8.5	
Chloroethane	ND	ug/m3	0.5	2.6	
Chloroform	ND	ug/m3	1	4.9	
Chloromethane	ND	ug/m3	0.4	2.1	
cis-1,2-Dichloroethene	ND	ug/m3	0.8	4	
cis-1,3-dichloropropene	ND	ug/m3	0.9	4.5	
Cyclohexane	ND	ug/m3	0.7	3.4	
Dichlorodifluoromethane	ND	ug/m3	1	4.9	
Ethyl Acetate	ND	ug/m3	9	18	
Ethylbenzene	ND	ug/m3	0.9	4.3	
Heptane	ND	ug/m3	0.8	4.1	
Hexachlorobutadiene	ND	ug/m3	2.1	11	
Hexane	ND	ug/m3	0.7	3.5	
Isopropyl alcohol (IPA)	ND	ug/m3	6.1	12	
m and p-Xylene	ND	ug/m3	0.9	4.3	
Methylene chloride	ND	ug/m3	0.7	3.5	
Methyl-t-butyl Ether (MTBE)	ND	ug/m3	0.7	3.6	
o-Xylene	ND	ug/m3	0.9	4.3	
Propene	ND	ug/m3	0.3	1.7	
Styrene	ND	ug/m3	1	4.2	

QCBatchID: QC1203510 **Analyst:** nicollez **Method:** EPA TO-15

Matrix: Air **Analyzed:** 06/24/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1203510MB1					
Tetrachloroethene	ND	ug/m3	1.4	6.8	
Toluene	ND	ug/m3	0.8	3.8	
trans-1,2-dichloroethene	ND	ug/m3	0.8	4	
trans-1,3-dichloropropene	ND	ug/m3	0.9	4.5	
Trichloroethene	ND	ug/m3	1.1	5.4	
Trichlorofluoromethane	ND	ug/m3	1.1	5.6	
Vinyl acetate	ND	ug/m3	0.7	3.5	
Vinyl Chloride	ND	ug/m3	0.5	2.6	
Xylenes (Total)	ND	ug/m3	0.9	4.3	

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1203510DUP1						**Source: 416463-003**
1,1,1-Trichloroethane	ND	ND	ug/m3	0.0	30	
1,1,2,2-Tetrachloroethane	ND	ND	ug/m3	0.0	30	
1,1,2-Trichloroethane	ND	ND	ug/m3	0.0	30	
1,1,2-Trichlorotrifluoroethane	ND	ND	ug/m3	0.0	30	
1,1-Dichloroethane	ND	ND	ug/m3	0.0	30	
1,1-Dichloroethene	ND	ND	ug/m3	0.0	30	
1,2,4-Trichlorobenzene	ND	ND	ug/m3	0.0	30	
1,2,4-Trimethylbenzene	ND	ND	ug/m3	0.0	30	
1,2-Dibromoethane	ND	ND	ug/m3	0.0	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ug/m3	0.0	30	
1,2-Dichlorobenzene	ND	ND	ug/m3	0.0	30	
1,2-Dichloroethane	ND	ND	ug/m3	0.0	30	
1,2-Dichloropropane	ND	ND	ug/m3	0.0	30	
1,3,5-Trimethylbenzene	ND	ND	ug/m3	0.0	30	
1,3-Butadiene	ND	ND	ug/m3	0.0	30	
1,3-Dichlorobenzene	ND	ND	ug/m3	0.0	30	
1,4-Dichlorobenzene	ND	ND	ug/m3	0.0	30	
1,4-Dioxane	ND	ND	ug/m3	0.0	30	
2-Butanone (MEK)	ND	ND	ug/m3	0.0	30	
2-Hexanone	ND	ND	ug/m3	0.0	30	
4-Ethyltoluene	ND	ND	ug/m3	0.0	30	
4-Methyl-2-pentanone (MIBK)	ND	ND	ug/m3	0.0	30	
Acetone	ND	ND	ug/m3	0.0	30	
Benzene	ND	ND	ug/m3	0.0	30	
Benzyl Chloride	ND	ND	ug/m3	0.0	30	
Bromodichloromethane	ND	ND	ug/m3	0.0	30	
Bromoform	ND	ND	ug/m3	0.0	30	
Bromomethane	ND	ND	ug/m3	0.0	30	
Carbon disulfide	ND	ND	ug/m3	0.0	30	
Carbon Tetrachloride	ND	ND	ug/m3	0.0	30	
Chlorobenzene	ND	ND	ug/m3	0.0	30	
Chlorodibromomethane	ND	ND	ug/m3	0.0	30	
Chloroethane	ND	ND	ug/m3	0.0	30	
Chloroform	ND	ND	ug/m3	0.0	30	
Chloromethane	ND	ND	ug/m3	0.0	30	
cis-1,2-Dichloroethene	2200	2100	ug/m3	4.7	30	
cis-1,3-dichloropropene	ND	ND	ug/m3	0.0	30	
Cyclohexane	ND	ND	ug/m3	0.0	30	
Dichlorodifluoromethane	ND	ND	ug/m3	0.0	30	

QCBatchID: QC1203510 **Analyst:** nicollez **Method:** EPA TO-15

Matrix: Air **Analyzed:** 06/24/2019 **Instrument:** VOA-MS (group)

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1203510DUP1						**Source: 416463-003**
Ethyl Acetate	ND	ND	ug/m3	0.0	30	
Ethylbenzene	ND	ND	ug/m3	0.0	30	
Heptane	ND	ND	ug/m3	0.0	30	
Hexachlorobutadiene	ND	ND	ug/m3	0.0	30	
Hexane	ND	ND	ug/m3	0.0	30	
Isopropyl alcohol (IPA)	ND	ND	ug/m3	0.0	30	
m and p-Xylene	ND	ND	ug/m3	0.0	30	
Methylene chloride	27.1	27.7	ug/m3	2.2	30	
Methyl-t-butyl Ether (MTBE)	ND	ND	ug/m3	0.0	30	
o-Xylene	ND	ND	ug/m3	0.0	30	
Propene	ND	ND	ug/m3	0.0	30	
Styrene	ND	ND	ug/m3	0.0	30	
Tetrachloroethene	7300	7600	ug/m3	4.0	30	
Toluene	ND	ND	ug/m3	0.0	30	
trans-1,2-dichloroethene	55.1	55.1	ug/m3	0.0	30	
trans-1,3-dichloropropene	ND	ND	ug/m3	0.0	30	
Trichloroethene	3400	3400	ug/m3	0.0	30	
Trichlorofluoromethane	ND	ND	ug/m3	0.0	30	
Vinyl acetate	ND	ND	ug/m3	0.0	30	
Vinyl Chloride	ND	ND	ug/m3	0.0	30	
Xylenes (Total)	ND	ND	ug/m3	0.0	30	

QCBatchID: QC1203659 **Analyst:** sandyw **Method:** EPA 8015M

Matrix: Air **Analyzed:** 06/27/2019 **Instrument:** VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1203659MB1					
Ethane	ND	Vppm	50	50	
Ethane	ND	Vppm	50	50	
Ethene	ND	Vppm	50	50	
Ethene	ND	Vppm	50	50	
Methane	ND	Vppm	50	50	
Methane	ND	Vppm	50	50	
Methane	ND	mg/L	0.005	0.005	
Methane ug/M3	ND	ug/m3	32800	32800	
Methane ug/M3	ND	ug/m3	32800	32800	

Duplicate Summary

Analyte	Sample Amount	Duplicate Amount	Units	RPD	Limits RPD	Notes
QC1203659DUP1						**Source: 416459-004**
Ethane	ND	ND	Vppm	0.0	20	
Ethene	ND	ND	Vppm	0.0	20	
Methane	ND	ND	Vppm	0.0	20	
Methane ug/M3	ND	ND	ug/m3	0.0	20	
QC1203659DUP2						**Source: 416473-003**
Methane	0.018	0.020	mg/L	10.5	30	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

931 W. Barkley Ave., Orange, CA 92868
Phone: (714) 771-6900 Fax: (714) 771-9933

Billing: Enthalpy Analytical
c/o Montrose Environmental Group Inc.
P.O. Box 741137, Los Angeles, CA 90074-1137

ENTHALPY ANALYTICAL

Air Chain of Custody Record

Lab Job No. 416459

Page _____ of _____

CUSTOMER INFORMATION				PROJECT INFORMATION		PO Number:
Company:	ENGEO			Name:	Shady View	
Report To:	Adrianna Lundberg			Number:	15535.000.000	Lab Quote Number:
Email:	alundberg@engeo.com			Address:		
Address:	6 Morgan, Suite 162				Chino Hills, CA	
	Irvine, CA 92618			Global ID:		
Phone:	949.579.2268	Fax:		Sampled By:		

Special Instructions:

Analysis Request: TO-15; Methane

Required Turnaround Time: Standard [X]; 4 Day [ ]; 72 Hour [ ]; 48 Hour [ ]; 24 Hour [ ]

	Sample ID	Air Type (I) Indoor (A) Ambient (SV) Soil Vapor	Equipment Information: Canister ID	Canister Size (6L or 1L)	Flow Controller ID	Start Sampling Information: Date	Time	Canister Pressure (in. Hg)	Stop Sampling Information: Date	Time	Canister Pressure (in. Hg)	TO-15	Methane	Comments
1	F-AST SG1@5	SV	00202	1L	104	6/19/19	1322	-30	6/19/19	1339	-5	X	X	
2	F-AST SG2@5	SV	00148	1L	10106	"	1355	-30	"	1408	-4	X	X	
3	E-AST SG1@5	SV	594	1L	0009	"	1130	-29	~~1447~~	1144	-4	X	X	
4	E-AST SG2@5	SV	00221	1L	00015	"	1146	-30	~~1308~~ Collected 1208	1208	-4	X	X	
5	E-AST SG3@5	SV	578	1L	00029	"	1209	-30	~~1228~~ 1228	1228	-4	~~X~~	~~X~~	hold
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE / TIME
RELINQUISHED BY:		HEATH SAWYER	ENGEO	6/19/19 15:08
RECEIVED BY:		G. Kim	GM	6/19/19 1508
RELINQUISHED BY:				
RECEIVED BY:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Engeo

Project: Shady View

Date Received: 6/19/19

Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☐ Yes, How many? _____ ☑ No (skip section 2)

Sample Temp (°C) (No Cooler): 23.4

Sample Temp (°C), One from each cooler: #1: _____ #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☐ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: _____ #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 6/19/19

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: ENGEO Inc.
Address: 6 Morgan, Suite 162
Irvine, CA 92618-1922

Attn: Adrianna Lundberg

Comments: Shady View
15535.000.000

Lab Request: 416458
Report Date: 06/27/2019
Date Received: 06/19/2019
Client ID: 15790

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
416458-004	3-pt composite SY SS-01-03
416458-008	3-pt composite SY SS-04-06
416458-009	E-AST SS-01@0
416458-012	E-AST SS-02@0
416458-015	E-AST SS-03@0
416458-018	F-AST SS-01@0
416458-021	F-AST SS-02@0
416458-024	F-AST SS-03@0
416458-027	E-AST SS-04@0
416458-030	F-AST SS-04@0
416458-033	F-AST SS-05@0

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Diane M. Galvan

Report Review performed by: Diane Galvan, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

Detections Summary

Sample #: 416458-004 **Client Sample #:** 3-pt composite SY SS-01-03

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	6.91	1	1	mg/Kg	
EPA 6010B	Barium	129	1	1	mg/Kg	
EPA 6010B	Cadmium	11.1	1	0.5	mg/Kg	
EPA 6010B	Chromium	18.0	1	1	mg/Kg	
EPA 6010B	Cobalt	10.8	1	0.5	mg/Kg	
EPA 6010B	Copper	26.9	1	1	mg/Kg	
EPA 6010B	Lead	29.0	1	1	mg/Kg	
EPA 6010B	Nickel	19.0	1	1.5	mg/Kg	
EPA 6010B	Vanadium	35.4	1	0.5	mg/Kg	
EPA 6010B	Zinc	308	1	5	mg/Kg	

Sample #: 416458-008 **Client Sample #:** 3-pt composite SY SS-04-06

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	4.26	1	1	mg/Kg	
EPA 6010B	Barium	78.8	1	1	mg/Kg	
EPA 6010B	Cadmium	0.88	1	0.5	mg/Kg	
EPA 6010B	Chromium	11.4	1	1	mg/Kg	
EPA 6010B	Cobalt	6.95	1	0.5	mg/Kg	
EPA 6010B	Copper	11.8	1	1	mg/Kg	
EPA 6010B	Lead	13.6	1	1	mg/Kg	
EPA 6010B	Nickel	11.7	1	1.5	mg/Kg	
EPA 6010B	Vanadium	24.6	1	0.5	mg/Kg	
EPA 6010B	Zinc	93.2	1	5	mg/Kg	
EPA 8015M	TPH (C13 to C28) (SGT)	185	5	50	mg/Kg	
EPA 8015M	TPH (C29 to C 40) (SGT)	116	5	100	mg/Kg	

Sample #: 416458-009 **Client Sample #:** E-AST SS-01@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	4.10	1	1	mg/Kg	
EPA 6010B	Barium	47.9	1	1	mg/Kg	
EPA 6010B	Cadmium	0.52	1	0.5	mg/Kg	
EPA 6010B	Chromium	9.23	1	1	mg/Kg	
EPA 6010B	Cobalt	5.56	1	0.5	mg/Kg	
EPA 6010B	Copper	8.48	1	1	mg/Kg	
EPA 6010B	Lead	14.5	1	1	mg/Kg	
EPA 6010B	Nickel	16.6	1	1.5	mg/Kg	
EPA 6010B	Vanadium	19.9	1	0.5	mg/Kg	
EPA 6010B	Zinc	33.6	1	5	mg/Kg	
EPA 8015M	TPH (C13 to C28) (SGT)	2200	50	500	mg/Kg	
EPA 8260B	Methylene chloride	7.0	1	5	ug/Kg	

Sample #: 416458-012 **Client Sample #:** E-AST SS-02@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	2.92	1	1	mg/Kg	
EPA 6010B	Barium	69.9	1	1	mg/Kg	
EPA 6010B	Cadmium	0.56	1	0.5	mg/Kg	
EPA 6010B	Chromium	11.8	1	1	mg/Kg	
EPA 6010B	Cobalt	6.49	1	0.5	mg/Kg	
EPA 6010B	Copper	9.57	1	1	mg/Kg	
EPA 6010B	Lead	7.26	1	1	mg/Kg	
EPA 6010B	Nickel	11.4	1	1.5	mg/Kg	
EPA 6010B	Vanadium	24.9	1	0.5	mg/Kg	
EPA 6010B	Zinc	36.1	1	5	mg/Kg	

Detections Summary

Sample #: 416458-012 **Client Sample #:** E-AST SS-02@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 8015M	TPH (C13 to C28) (SGT)	350	20	200	mg/Kg	
EPA 8260B	Methylene chloride	5.3	1	5	ug/Kg	

Sample #: 416458-015 **Client Sample #:** E-AST SS-03@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	2.32	1	1	mg/Kg	
EPA 6010B	Barium	59.1	1	1	mg/Kg	
EPA 6010B	Cadmium	0.62	1	0.5	mg/Kg	
EPA 6010B	Chromium	10.5	1	1	mg/Kg	
EPA 6010B	Cobalt	7.62	1	0.5	mg/Kg	
EPA 6010B	Copper	10.1	1	1	mg/Kg	
EPA 6010B	Lead	3.22	1	1	mg/Kg	
EPA 6010B	Nickel	10.2	1	1.5	mg/Kg	
EPA 6010B	Vanadium	24.3	1	0.5	mg/Kg	
EPA 6010B	Zinc	29.8	1	5	mg/Kg	

Sample #: 416458-018 **Client Sample #:** F-AST SS-01@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	3.70	1	1	mg/Kg	
EPA 6010B	Barium	113	1	1	mg/Kg	
EPA 6010B	Cadmium	0.70	1	0.5	mg/Kg	
EPA 6010B	Chromium	24.8	1	1	mg/Kg	
EPA 6010B	Cobalt	12.0	1	0.5	mg/Kg	
EPA 6010B	Copper	17.4	1	1	mg/Kg	
EPA 6010B	Lead	15.9	1	1	mg/Kg	
EPA 6010B	Nickel	15.8	1	1.5	mg/Kg	
EPA 6010B	Vanadium	50.1	1	0.5	mg/Kg	
EPA 6010B	Zinc	50.7	1	5	mg/Kg	

Sample #: 416458-021 **Client Sample #:** F-AST SS-02@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	6.34	1	1	mg/Kg	
EPA 6010B	Barium	115	1	1	mg/Kg	
EPA 6010B	Cadmium	0.64	1	0.5	mg/Kg	
EPA 6010B	Chromium	21.0	1	1	mg/Kg	
EPA 6010B	Cobalt	10.1	1	0.5	mg/Kg	
EPA 6010B	Copper	13.8	1	1	mg/Kg	
EPA 6010B	Lead	8.85	1	1	mg/Kg	
EPA 6010B	Nickel	14.2	1	1.5	mg/Kg	
EPA 6010B	Vanadium	43.8	1	0.5	mg/Kg	
EPA 6010B	Zinc	41.2	1	5	mg/Kg	

Sample #: 416458-024 **Client Sample #:** F-AST SS-03@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	5.29	1	1	mg/Kg	
EPA 6010B	Barium	124	1	1	mg/Kg	
EPA 6010B	Cadmium	0.78	1	0.5	mg/Kg	
EPA 6010B	Chromium	26.4	1	1	mg/Kg	
EPA 6010B	Cobalt	11.8	1	0.5	mg/Kg	
EPA 6010B	Copper	17.6	1	1	mg/Kg	
EPA 6010B	Lead	9.77	1	1	mg/Kg	
EPA 6010B	Nickel	15.7	1	1.5	mg/Kg	
EPA 6010B	Vanadium	51.9	1	0.5	mg/Kg	

Detections Summary

Sample #: 416458-024 **Client Sample #:** F-AST SS-03@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Zinc	52.1	1	5	mg/Kg	
EPA 8015M	TPH (C13 to C28) (SGT)	18.0	1	10	mg/Kg	

Sample #: 416458-027 **Client Sample #:** E-AST SS-04@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	3.56	1	1	mg/Kg	
EPA 6010B	Barium	78.7	1	1	mg/Kg	
EPA 6010B	Cadmium	0.78	1	0.5	mg/Kg	
EPA 6010B	Chromium	13.4	1	1	mg/Kg	
EPA 6010B	Cobalt	6.96	1	0.5	mg/Kg	
EPA 6010B	Copper	10.9	1	1	mg/Kg	
EPA 6010B	Lead	16.8	1	1	mg/Kg	
EPA 6010B	Nickel	12.1	1	1.5	mg/Kg	
EPA 6010B	Vanadium	26.4	1	0.5	mg/Kg	
EPA 6010B	Zinc	51.0	1	5	mg/Kg	
EPA 8015M	TPH (C13 to C28) (SGT)	61.1	5	50	mg/Kg	
EPA 8260B	Methylene chloride	5.0	1	5	ug/Kg	

Sample #: 416458-030 **Client Sample #:** F-AST SS-04@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	4.94	1	1	mg/Kg	
EPA 6010B	Barium	124	1	1	mg/Kg	
EPA 6010B	Cadmium	0.83	1	0.5	mg/Kg	
EPA 6010B	Chromium	30.5	1	1	mg/Kg	
EPA 6010B	Cobalt	12.9	1	0.5	mg/Kg	
EPA 6010B	Copper	18.8	1	1	mg/Kg	
EPA 6010B	Lead	9.47	1	1	mg/Kg	
EPA 6010B	Nickel	18.8	1	1.5	mg/Kg	
EPA 6010B	Vanadium	54.9	1	0.5	mg/Kg	
EPA 6010B	Zinc	51.6	1	5	mg/Kg	

Sample #: 416458-033 **Client Sample #:** F-AST SS-05@0

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 6010B	Arsenic	5.39	1	1	mg/Kg	
EPA 6010B	Barium	119	1	1	mg/Kg	
EPA 6010B	Cadmium	0.72	1	0.5	mg/Kg	
EPA 6010B	Chromium	24.4	1	1	mg/Kg	
EPA 6010B	Cobalt	12.4	1	0.5	mg/Kg	
EPA 6010B	Copper	16.4	1	1	mg/Kg	
EPA 6010B	Lead	11.4	1	1	mg/Kg	
EPA 6010B	Nickel	17.7	1	1.5	mg/Kg	
EPA 6010B	Vanadium	49.4	1	0.5	mg/Kg	
EPA 6010B	Zinc	48.2	1	5	mg/Kg	
EPA 8015M	TPH (C13 to C28) (SGT)	23.2	1	10	mg/Kg	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019	**Site:**			
Sample #:	**416458-004**	**Client Sample #:**	3-pt composite SY SS-01-03	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**6.91**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**129**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**11.1**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**18.0**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**10.8**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**26.9**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**29.0**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**19.0**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**35.4**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**308**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*101*	*50-150*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019	**Site:**			
Sample #:	**416458-008**	**Client Sample #:**	3-pt composite SY SS-04-06	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**4.26**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**78.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.88**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**11.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**6.95**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**11.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**13.6**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**11.7**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**24.6**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**93.2**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	**185**	5	50	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	**116**	5	100	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	5	50	mg/Kg		06/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*148*	*50-150*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 07:50	**Site:**			
Sample #:	**416458-009**	**Client Sample #:**	E-AST SS-01@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**4.10**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**47.9**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.52**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**9.23**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**5.56**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**8.48**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**14.5**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**16.6**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**19.9**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**33.6**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	**2200**	50	500	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	50	1000	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	50	500	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*98*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 07:50	**Site:**			
Sample #:	**416458-009**	**Client Sample #:**	E-AST SS-01@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	**7.0**	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*93*	*70-145*	
4-Bromofluorobenzene (SUR)	*120*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 08:10	**Site:**			
Sample #:	**416458-012**	**Client Sample #:**	E-AST SS-02@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**2.92**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**69.9**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.56**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**11.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**6.49**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**9.57**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**7.26**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**11.4**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**24.9**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**36.1**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	**350**	20	200	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	20	400	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	20	200	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*150*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 08:10	**Site:**			
Sample #:	**416458-012**	**Client Sample #:**	E-AST SS-02@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	**5.3**	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*94*	*70-145*	
4-Bromofluorobenzene (SUR)	*131*	*70-145*	
Dibromofluoromethane (SUR)	*105*	*70-145*	
Toluene-d8 (SUR)	*98*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 08:20	**Site:**			
Sample #:	**416458-015**	**Client Sample #:**	E-AST SS-03@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**2.32**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**59.1**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.62**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**10.5**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**7.62**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**10.1**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**3.22**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**10.2**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**24.3**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**29.8**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*185*		*50-150*	*S*	*Surrogate high but sample is ND*			
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 08:20	**Site:**			
Sample #:	**416458-015**	**Client Sample #:**	E-AST SS-03@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*95*	*70-145*	
4-Bromofluorobenzene (SUR)	*111*	*70-145*	
Dibromofluoromethane (SUR)	*104*	*70-145*	
Toluene-d8 (SUR)	*105*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 11:04	**Site:**			
Sample #:	**416458-018**	**Client Sample #:**	F-AST SS-01@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**3.70**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**113**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.70**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**24.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**12.0**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**17.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**15.9**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**15.8**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**50.1**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**50.7**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*202*		*50-150*	*S*	*Surrogate high but sample is ND*			
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 11:04	**Site:**			
Sample #:	**416458-018**	**Client Sample #:**	F-AST SS-01@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*107*	*70-145*	
4-Bromofluorobenzene (SUR)	*112*	*70-145*	
Dibromofluoromethane (SUR)	*114*	*70-145*	
Toluene-d8 (SUR)	*102*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 11:37	**Site:**			
Sample #:	**416458-021**	**Client Sample #:**	F-AST SS-02@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**6.34**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**115**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.64**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**21.0**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**10.1**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**13.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**8.85**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**14.2**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**43.8**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**41.2**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*146*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 11:37	**Site:**			
Sample #:	**416458-021**	**Client Sample #:**	F-AST SS-02@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*97*	*70-145*	
4-Bromofluorobenzene (SUR)	*107*	*70-145*	
Dibromofluoromethane (SUR)	*105*	*70-145*	
Toluene-d8 (SUR)	*101*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 12:38	**Site:**			
Sample #:	**416458-024**	**Client Sample #:**	F-AST SS-03@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**5.29**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**124**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.78**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**26.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**17.6**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**9.77**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**15.7**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**51.9**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**52.1**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	**18.0**	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*	
Triacontane (SUR)	*213*	*50-150*	*S*	*Surrogate recovery still high after re-extra*

Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531	
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 12:38	**Site:**			
Sample #:	**416458-024**	**Client Sample #:**	F-AST SS-03@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*97*	*70-145*	
4-Bromofluorobenzene (SUR)	*110*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*107*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 08:54	**Site:**			
Sample #:	**416458-027**	**Client Sample #:**	E-AST SS-04@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**3.56**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**78.7**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.78**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**13.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**6.96**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**10.9**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**16.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**12.1**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**26.4**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**51.0**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	**61.1**	5	50	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	5	100	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	5	50	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*130*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 08:54	**Site:**			
Sample #:	**416458-027**	**Client Sample #:**	E-AST SS-04@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	**5.0**	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*97*	*70-145*	
4-Bromofluorobenzene (SUR)	*115*	*70-145*	
Dibromofluoromethane (SUR)	*105*	*70-145*	
Toluene-d8 (SUR)	*103*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 12:50	**Site:**			
Sample #:	**416458-030**	**Client Sample #:**	F-AST SS-04@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**4.94**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**124**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.83**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**30.5**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**12.9**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**18.8**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**9.47**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**18.8**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**54.9**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**51.6**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*104*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 12:50	**Site:**			
Sample #:	**416458-030**	**Client Sample #:**	F-AST SS-04@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*98*	*70-145*	
4-Bromofluorobenzene (SUR)	*108*	*70-145*	
Dibromofluoromethane (SUR)	*106*	*70-145*	
Toluene-d8 (SUR)	*112*	*70-145*	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 13:10	**Site:**			
Sample #:	**416458-033**	**Client Sample #:**	F-AST SS-05@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1203542		
Antimony	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Arsenic	**5.39**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Barium	**119**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Cadmium	**0.72**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Chromium	**24.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Cobalt	**12.4**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Copper	**16.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Lead	**11.4**	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Molybdenum	ND	1	1	mg/Kg	06/25/19	06/26/19	KLN	
Nickel	**17.7**	1	1.5	mg/Kg	06/25/19	06/26/19	KLN	
Selenium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Silver	ND	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Thallium	ND	1	3	mg/Kg	06/25/19	06/26/19	KLN	
Vanadium	**49.4**	1	0.5	mg/Kg	06/25/19	06/26/19	KLN	
Zinc	**48.2**	1	5	mg/Kg	06/25/19	06/26/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1203554		
Mercury	ND	1	0.14	mg/Kg	06/25/19	06/25/19	JP	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203546		
TPH (C13 to C28) (SGT)	**23.2**	1	10	mg/Kg		06/26/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg		06/26/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg		06/26/19	TW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*159*		*50-150*	*S*	*Surrogate recovery high after re-extraction*			
Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1203531		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		06/25/19	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		06/25/19	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		06/25/19	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		06/25/19	ZZ	
Acetone	ND	1	100	ug/Kg		06/25/19	ZZ	

Matrix:	Solid	**Client:**	ENGEO Inc.	**Collector:**	Client
Sampled:	06/19/2019 13:10	**Site:**			
Sample #:	**416458-033**	**Client Sample #:**	F-AST SS-05@0	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Benzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromoform	ND	1	5	ug/Kg		06/25/19	ZZ	
Bromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloroform	ND	1	5	ug/Kg		06/25/19	ZZ	
Chloromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Dibromomethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		06/25/19	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Methylene chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		06/25/19	ZZ	
Naphthalene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
o-Xylene	ND	1	5	ug/Kg		06/25/19	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Styrene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		06/25/19	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Toluene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		06/25/19	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichloroethene	ND	1	5	ug/Kg		06/25/19	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		06/25/19	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		06/25/19	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		06/25/19	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*97*	*70-145*	
4-Bromofluorobenzene (SUR)	*110*	*70-145*	
Dibromofluoromethane (SUR)	*106*	*70-145*	
Toluene-d8 (SUR)	*102*	*70-145*	

QCBatchID: QC1203531	Analyst: Rlee	Method: EPA 8260B
Matrix: Solid	Analyzed: 06/25/2019	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1203531MB1						
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,1-Trichloroethane	ND	ug/Kg		5		
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,2-Trichloroethane	ND	ug/Kg		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5		
1,1-Dichloroethane	ND	ug/Kg		5		
1,1-Dichloroethene	ND	ug/Kg		5		
1,1-Dichloropropene	ND	ug/Kg		5		
1,2,3-Trichlorobenzene	ND	ug/Kg		5		
1,2,3-Trichloropropane	ND	ug/Kg		5		
1,2,4-Trichlorobenzene	ND	ug/Kg		5		
1,2,4-Trimethylbenzene	ND	ug/Kg		5		
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5		
1,2-Dibromoethane	ND	ug/Kg		5		
1,2-Dichlorobenzene	ND	ug/Kg		5		
1,2-Dichloroethane	ND	ug/Kg		5		
1,2-Dichloropropane	ND	ug/Kg		5		
1,3,5-Trimethylbenzene	ND	ug/Kg		5		
1,3-Dichlorobenzene	ND	ug/Kg		5		
1,3-Dichloropropane	ND	ug/Kg		5		
1,4-Dichlorobenzene	ND	ug/Kg		5		
2,2-Dichloropropane	ND	ug/Kg		5		
2-Butanone (MEK)	ND	ug/Kg		100		
2-Chlorotoluene	ND	ug/Kg		5		
4-Chlorotoluene	ND	ug/Kg		5		
4-Isopropyltoluene	ND	ug/Kg		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5		
Acetone	ND	ug/Kg		100		
Allyl Chloride	ND	ug/Kg		5		
Benzene	ND	ug/Kg		5		
Bromobenzene	ND	ug/Kg		5		
Bromochloromethane	ND	ug/Kg		5		
Bromodichloromethane	ND	ug/Kg		5		
Bromoform	ND	ug/Kg		5		
Bromomethane	ND	ug/Kg		5		
Carbon Tetrachloride	ND	ug/Kg		5		
Chlorobenzene	ND	ug/Kg		5		
Chlorodibromomethane	ND	ug/Kg		5		
Chloroethane	ND	ug/Kg		5		
Chloroform	ND	ug/Kg		5		
Chloromethane	ND	ug/Kg		5		
cis-1,2-Dichloroethene	ND	ug/Kg		5		
cis-1,3-dichloropropene	ND	ug/Kg		5		
cis-1,4-dichloro-2-butene	ND	ug/Kg		5		
Dibromomethane	ND	ug/Kg		5		
Dichlorodifluoromethane	ND	ug/Kg		5		
Di-isopropyl ether (DIPE)	ND	ug/Kg		5		
Ethylbenzene	ND	ug/Kg		5		
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5		
Hexachlorobutadiene	ND	ug/Kg		5		
Isopropylbenzene	ND	ug/Kg		5		
m and p-Xylene	ND	ug/Kg		5		

QCBatchID: QC1203531 **Analyst:** Rlee **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 06/25/2019 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes	
QC1203531MB1						
Methylene chloride	ND	ug/Kg		5		
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5		
Naphthalene	ND	ug/Kg		5		
N-butylbenzene	ND	ug/Kg		5		
N-propylbenzene	ND	ug/Kg		5		
o-Xylene	ND	ug/Kg		5		
Sec-butylbenzene	ND	ug/Kg		5		
Styrene	ND	ug/Kg		5		
t-Butyl alcohol (TBA)	ND	ug/Kg		10		
Tert-amylmethylether (TAME)	ND	ug/Kg		5		
Tert-butylbenzene	ND	ug/Kg		5		
Tetrachloroethene	ND	ug/Kg		5		
Toluene	ND	ug/Kg		5		
trans-1,2-dichloroethene	ND	ug/Kg		5		
trans-1,3-dichloropropene	ND	ug/Kg		5		
trans-1,4-dichloro-2-butene	ND	ug/Kg		5		
Trichloroethene	ND	ug/Kg		5		
Trichlorofluoromethane	ND	ug/Kg		5		
Vinyl Chloride	ND	ug/Kg		5		
Xylenes (Total)	ND	ug/Kg		5		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203531LCS1, QC1203531LCSD1											
1,1-Dichloroethene	50	50	52	51	ug/Kg	104	102	2	59-172	22	
Benzene	50	50	52	51	ug/Kg	104	102	2	62-137	24	
Chlorobenzene	50	50	54	52	ug/Kg	108	104	4	60-133	24	
Methyl-t-butyl Ether (MTBE)	50	50	50	51	ug/Kg	100	102	2	62-137	21	
Toluene	50	50	49	54	ug/Kg	98	108	10	59-139	21	
Trichloroethene	50	50	56	60	ug/Kg	112	120	7	66-142	21	

QCBatchID: QC1203542 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 06/25/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1203542MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203542LCS1											
Antimony	100		111		mg/Kg	111			80-120		
Arsenic	100		98.4		mg/Kg	98			80-120		
Barium	100		98.5		mg/Kg	99			80-120		
Beryllium	100		104		mg/Kg	104			80-120		
Cadmium	100		104		mg/Kg	104			80-120		
Chromium	100		101		mg/Kg	101			80-120		
Cobalt	100		108		mg/Kg	108			80-120		
Copper	100		91.2		mg/Kg	91			80-120		
Lead	100		104		mg/Kg	104			80-120		
Molybdenum	100		111		mg/Kg	111			80-120		
Nickel	100		107		mg/Kg	107			80-120		
Selenium	100		98.2		mg/Kg	98			80-120		
Silver	100		111		mg/Kg	111			80-120		
Thallium	100		102		mg/Kg	102			80-120		
Vanadium	100		105		mg/Kg	105			80-120		
Zinc	100		102		mg/Kg	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203542MS1, QC1203542MSD1												**Source: 416458-004**
Antimony	0.46	100	100	38.1	40.4	mg/Kg	38	40	5.9	75-125	20	M
Arsenic	6.91	100	100	106	110	mg/Kg	99	103	3.7	75-125	20	
Barium	129	100	100	230	240	mg/Kg	101	111	4.3	75-125	20	
Beryllium	ND	100	100	103	107	mg/Kg	103	107	3.8	75-125	20	
Cadmium	11.1	100	100	104	107	mg/Kg	93	96	2.8	75-125	20	
Chromium	18.0	100	100	119	124	mg/Kg	101	106	4.1	75-125	20	
Cobalt	10.8	100	100	111	117	mg/Kg	100	106	5.3	75-125	20	
Copper	26.9	100	100	121	126	mg/Kg	94	99	4.0	75-125	20	
Lead	29.0	100	100	127	129	mg/Kg	98	100	1.6	75-125	20	
Molybdenum	0.35	100	100	104	108	mg/Kg	104	108	3.8	75-125	20	

QCBatchID: QC1203542 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 06/25/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203542MS1, QC1203542MSD1												**Source: 416458-004**
Nickel	19.0	100	100	122	126	mg/Kg	103	107	3.2	75-125	20	
Selenium	ND	100	100	95.2	104	mg/Kg	95	104	8.8	75-125	20	
Silver	ND	100	100	105	111	mg/Kg	105	111	5.6	75-125	20	
Thallium	0.74	100	100	95.1	98.7	mg/Kg	94	98	3.7	75-125	20	
Vanadium	35.4	100	100	144	148	mg/Kg	109	113	2.7	75-125	20	
Zinc	308	100	100	291	284	mg/Kg	0	0	2.4	75-125	20	M

QCBatchID: QC1203546 **Analyst:** TWu **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 06/25/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1203546MB1					
TPH (C10 to C28) (SGT)	ND	mg/Kg		10	
TPH (C13 to C28) (SGT)	ND	mg/Kg		10	
TPH (C29 to C 40) (SGT)	ND	mg/Kg		20	
TPH (C6 to C12) (SGT)	ND	mg/Kg		10	
TPH Diesel (SGT)	ND	mg/Kg		10	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203546LCS1											
TPH (C10 to C28)	250		232.31			93			-		
TPH Diesel (SGT)	250		220		mg/Kg	88			36-138		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203546MS1, QC1203546MSD1												**Source: 416458-004**
TPH (C10 to C28) (SGT)	ND	250	250	216	218	mg/Kg	86	87	0.9	70-130	30	

QCBatchID: QC1203554 **Analyst:** cmorales **Method:** EPA 7471A

Matrix: Solid **Analyzed:** 06/25/2019 **Instrument:** AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1203554MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203554LCS1											
Mercury	0.83		0.74		mg/Kg	89			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203554MS1, QC1203554MSD1												**Source: 416458-004**
Mercury	ND	0.83	0.83	0.87	0.70	mg/Kg	105	84	21.7	75-125	20	M

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL		Chain of Custody Record		Turn Around Time (Rush by advanced notice only)										
931 W. Barkley Ave., Orange, CA 92868	ENTHALPY analytical, inc.	Lab No: 416458		Standard:	✓	4 Day:		3 Day:						
Phone: (714) 771-6900 Fax: (714) 538-1209		Page:	of	2 Day:		1 Day:		Same Day:						
Billing: Enthalpy Analytical		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other										
1 Park Plaza, Suite 1000														
Irvine, CA 92614														

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	ENGEO	Name:	Shady View
Report To:	Adrianna Lundberg	Number:	
Email:	alundberg@engeo.com	P.O. #:	15535.000.000
Address:	6 Morgan Suite 162	Address:	Scrap Yard
	Irvine, CA		Chino Hills, CA
Phone:	949.491.6366	Global ID:	
Fax:		Sampled By:	

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	6010 - CAM 17	8015 - DRO, MORO	8260 - VOCs	Test Instructions / Comments
1	SY SS-01@Ø	6/19/19	1054	soil	1/ 2x6	-	X	X		silica gel cleanup TPH DRO and MORO
2	SY SS-02@Ø		1058			-	X	X		
3	SY SS-03@Ø		1100			-	X	X		3-pt composite 01-03
4	SY SS-04@Ø		1236			-	X	X		
5	SY SS-05@Ø	6/19/19	1237			-	X	X		
6	SY SS-06@Ø		1240	*	*	-	X	X		3-pt composite 01-03
7						-				
8						-				
9						--				
10						-				

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		HEATH SAWYER	ENGEO / Geologist	6/19/19 6:09.
[1] Received By:			EA	6/19/19 15:09
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL		Chain of Custody Record		Turn Around Time (Rush by advanced notice only)								
931 W. Barkley Ave., Orange, CA 92868	ENTHALPY analytical, inc.	Lab No:		Standard:	✓	4 Day:		3 Day:				
Phone: (714) 771-6900 Fax: (714) 538-1209		Page:	of	2 Day:		1 Day:		Same Day:				
Billing: Enthalpy Analytical		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other								
1 Park Plaza, Suite 1000												
Irvine, CA 92614												

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	ENGEO	Name:	Shady View
Report To:	Adrianna Lundberg	Number:	
Email:	alundberg@engeo.com	P.O. #:	15535.000.000
Address:	6 Morgan Suite 162	Address:	Existing AST
	Irvine, CA		Chino Hills, CA
Phone:	949.491.6366	Global ID:	
Fax:		Sampled By:	

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	6010 - CAM 17	8015 - DRO, MORO	8260 - VOCs							Test Instructions / Comments
1	E-AST SS-01@0	6/19/19	~~750~~ soil	soil	1/ 2x6	-	X	X	X							silica gel cleanup TPH DRO and MORO
2	E-AST SS-01@3		~~750~~ soil		1/ 2x6	-										hold
3	E-AST SS-01@8		~~805~~ soil		1/ 2x6	-										hold
4	E-AST SS-02@0		~~810~~ soil		1/ 2x6	-	X	X	X							
5	E-AST SS-02@3		~~812~~ soil		1/ 2x6	-										hold
6	E-AST-SS-02@8		~~816~~ soil		1/ 2x6	-										hold
7	E-AST-SS-03@0		~~820~~ soil		1/ 2x6	-	X	X	X							
8	E-AST-SS-03@3		~~825~~ soil		1/ 2x6	-										hold
9	E-AST-SS-03@8		~~832~~ soil		1/ 2x6	--										hold
10						-										

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Heath Sawyer	ENGEO / Geologist	6/19/19 05:10
[1] Received By:				6/19/19 15:10
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL	Chain of Custody Record	Turn Around Time (Rush by advanced notice only)
931 W. Barkley Ave., Orange, CA 92868 Phone: (714) 771-6900 Fax: (714) 538-1209	Lab No:	Standard: ✓ 4 Day: 3 Day:
Billing: Enthalpy Analytical 1 Park Plaza, Suite 1000 Irvine, CA 92614	Page: of	2 Day: 1 Day: Same Day:

ENTHALPY analytical, inc.

Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	ENGEO	Name:	Shady View
Report To:	Adrianna Lundberg	Number:	
Email:	alundberg@engeo.com	P.O. #:	15535.000.000
Address:	6 Morgan Suite 162	Address:	Former AST
	Irvine, CA		Chino Hills, CA
Phone:	949.491.6366	Global ID:	
Fax:		Sampled By:	

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	6010 - CAM 17	8015 - DRO, MORO	8260 - VOCs	Test Instructions / Comments
1	F-AST SS-01@0	6/19/19	1104 ~~soil~~	Soil	1/ 2x6	-	X	X	X	silica gel cleanup TPH DRO and MORO
2	F-AST SS-01@3	"	1105 ~~soil~~	"	1/ 2x6	-				Hold
3	F-AST SS-01@8	"	1108 ~~soil~~	"	1/ 2x6	-				Hold
4	F-AST SS-02@0	"	1137 ~~soil~~	"	1/ 2x6	-	X	X	X	
5	F-AST SS-02@3	"	1138 ~~soil~~	"	1/ 2x6	-				Hold
6	F-AST-SS-02@8	"	1230 ~~soil~~	"	1/ 2x6	-				Hold
7	F-AST SS-03@0	"	1250 ~~soil~~	"	1/ 2x6	-	X	X	X	
8	F-AST SS-03@3	"	1240 ~~soil~~	"	1/ 2x6	-				Hold
9	F-AST SS-03@8	"	1243 ~~soil~~	"	1/ 2x6	--				Hold
10						-				

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		Heath Sawyer	ENGEO / Geologist	6/19/19 15:09
1 Received By:		B. Kim	EA	6/19/19 15:09
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL		Chain of Custody Record	Turn Around Time (Rush by advanced notice only)
931 W. Barkley Ave., Orange, CA 92868	ENTHALPY analytical, inc.	Lab No:	Standard: ✓ 4 Day: 3 Day:
Phone: (714) 771-6900 Fax: (714) 538-1209		Page: of	2 Day: 1 Day: Same Day:
Billing: Enthalpy Analytical 1 Park Plaza, Suite 1000 Irvine, CA 92614		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other	Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	ENGEO	Name:	Shady View
Report To:	Adrianna Lundberg	Number:	
Email:	alundberg@engeo.com	P.O. #:	15535.000.000
Address:	6 Morgan Suite 162	Address:	Existing AST
	Irvine, CA		Chino Hills, CA
Phone:	949.491.6366	Global ID:	
Fax:		Sampled By:	

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	6010 - CAM 17	8015 - DRO, MORO	8260 - VOCs	Test Instructions / Comments
1	E-AST SS-04@0	6/19/19	~~854 soil~~	soil	1/ 2x6	-	X	X	X	silica gel.cleanup TPH DRO and MORO
2	E-AST SS-04@3	"	~~855 soil~~	"	1/ 2x6	-				hold
3	E-AST SS-04@8	"	~~902 soil~~	"	1/ 2x6	-				hold
4						-				
5	~~E-AST GW-04@~~		groundwater			HCL				no groundwater received
6	~~E-AST GW-04@~~		groundwater			-				
7						-				
8						-				
9						-				
10						-				

	Signature	Print Name	Company / Title	Date / Time
1 Relinquished By:		HEATH SAWYER	ENGEO / Geologist	6/19/19 15:11
1 Received By:		GH	GH	6/19/19 1521
2 Relinquished By:				
2 Received By:				
3 Relinquished By:				
3 Received By:				

ENTHALPY ANALYTICAL		Chain of Custody Record	Turn Around Time (Rush by advanced notice only)
931 W. Barkley Ave., Orange, CA 92868	ENTHALPY analytical, inc.	Lab No:	Standard: ✓ 4 Day: 3 Day:
Phone: (714) 771-6900 Fax: (714) 538-1209		Page: of	2 Day: 1 Day: Same Day:
Billing: Enthalpy Analytical		Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other	Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other
1 Park Plaza, Suite 1000			
Irvine, CA 92614			

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	ENGEO	Name:	Shady View
Report To:	Adrianna Lundberg	Number:	
Email:	alundberg@engeo.com	P.O. #:	15535.000.000
Address:	6 Morgan Suite 162	Address:	Former AST
	Irvine, CA		Chino Hills, CA
Phone:	949.491.6366	Global ID:	
Fax:		Sampled By:	

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	6010 - CAM 17	8015 - DRO, MORO	8260 - VOCs	Test Instructions / Comments
1	F-AST SS-04@0	6/19/19	1250 ~~soil~~	~~Soil~~	1/ 2x6	-	X	X	X	silica gel cleanup TPH DRO and MORO
2	F-AST SS-04@3		~~1258 soil~~ 1252		1/ 2x6	-				hold
3	F-AST SS-04@8		1304 ~~soil~~		1/ 2x6	-				hold
4	F-AST SS-05@0		1310 ~~soil~~		1/ 2x6	-	X	X	X	
5	F-AST SS-05@3		1311 ~~soil~~		1/ 2x6	-				hold
6	F-AST-SS-05@8		1322 ~~soil~~		1/ 2x6	-				hold
7						-				
8						-				
9						--				
10						-				

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Heath Sawyer	ENGEO / Geologist	6/19/19 15:10
[1] Received By:		G. Kim	GK	6/19/19 15:10
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Engeo Project: Shady View

Date Received: 6/19/19 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 2 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 7.2 #2: 5.9 #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☐ Ice ☑ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 4.3 #2: 2.3 #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 6/19/19

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: ENGEO Inc.
Address: 6 Morgan, Suite 162
Irvine, CA 92618-1922

Attn: Adrianna Lundberg

Comments: Shady View
15535.000.000

Supplemental Report

Lab Request: 416458
Report Date: 07/02/2019
Date Received: 06/19/2019
Client ID: 15790

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
416458-010	E-AST SS-01@3
416458-011	E-AST SS-01@8
416458-013	E-AST SS-02@3
416458-014	E-AST SS-02@8
416458-031	F-AST SS-04@3
416458-032	F-AST SS-04@8
416458-034	F-AST SS-05@3
416458-035	F-AST SS-05@8

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Diane M. Galvan

Report Review performed by: Diane Galvan, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 45 days from date received.

Detections Summary

Sample #: 416458-010 **Client Sample #:** E-AST SS-01@3

No analyte detected

Sample #: 416458-011 **Client Sample #:** E-AST SS-01@8

No analyte detected

Sample #: 416458-013 **Client Sample #:** E-AST SS-02@3

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 8015M	TPH (C13 to C28) (SGT)	207	4	40	mg/Kg	
EPA 8015M	TPH (C29 to C 40) (SGT)	183	4	80	mg/Kg	

Sample #: 416458-014 **Client Sample #:** E-AST SS-02@8

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 8015M	TPH (C13 to C28) (SGT)	287	4	40	mg/Kg	
EPA 8015M	TPH (C29 to C 40) (SGT)	260	4	80	mg/Kg	

Sample #: 416458-031 **Client Sample #:** F-AST SS-04@3

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 8015M	TPH (C13 to C28) (SGT)	58.4	2	20	mg/Kg	
EPA 8015M	TPH (C29 to C 40) (SGT)	67.7	2	40	mg/Kg	

Sample #: 416458-032 **Client Sample #:** F-AST SS-04@8

No analyte detected

Sample #: 416458-034 **Client Sample #:** F-AST SS-05@3

Method	Analyte	Result	DF	RDL	Units	Notes
EPA 8015M	TPH (C13 to C28) (SGT)	62.8	1	10	mg/Kg	
EPA 8015M	TPH (C29 to C 40) (SGT)	64.8	1	20	mg/Kg	

Sample #: 416458-035 **Client Sample #:** F-AST SS-05@8

No analyte detected

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 07:50 **Site:**
Sample #: **416458-010** **Client Sample #:** E-AST SS-01@3 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	ND	2	20	mg/Kg	06/28/19	07/01/19	TW	D2
TPH (C29 to C 40) (SGT)	ND	2	40	mg/Kg	06/28/19	07/01/19	TW	D2
TPH (C6 to C12) (SGT)	ND	2	20	mg/Kg	06/28/19	07/01/19	TW	D2

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*125*	*50-150*	*10g used, spike amount changed to 20ppr*

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 08:05 **Site:**
Sample #: **416458-011** **Client Sample #:** E-AST SS-01@8 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	ND	2	20	mg/Kg	06/28/19	07/01/19	TW	D2
TPH (C29 to C 40) (SGT)	ND	2	40	mg/Kg	06/28/19	07/01/19	TW	D2
TPH (C6 to C12) (SGT)	ND	2	20	mg/Kg	06/28/19	07/01/19	TW	D2

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*100*	*50-150*	*10g used, spike amount changed to 20ppr*

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 08:12 **Site:**
Sample #: **416458-013** **Client Sample #:** E-AST SS-02@3 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	**207**	4	40	mg/Kg	06/28/19	07/01/19	TW	
TPH (C29 to C 40) (SGT)	**183**	4	80	mg/Kg	06/28/19	07/01/19	TW	
TPH (C6 to C12) (SGT)	ND	4	40	mg/Kg	06/28/19	07/01/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*51*	*50-150*	*10g used, spike amount changed to 20ppr*

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 08:16 **Site:**
Sample #: **416458-014** **Client Sample #:** E-AST SS-02@8 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	**287**	4	40	mg/Kg	06/28/19	07/01/19	TW	
TPH (C29 to C 40) (SGT)	**260**	4	80	mg/Kg	06/28/19	07/01/19	TW	
TPH (C6 to C12) (SGT)	ND	4	40	mg/Kg	06/28/19	07/01/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*54*	*50-150*	*10g used, spike amount changed to 20ppr*

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 12:52 **Site:**
Sample #: **416458-031** **Client Sample #:** F-AST SS-04@3 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	**58.4**	2	20	mg/Kg	06/28/19	07/01/19	TW	
TPH (C29 to C 40) (SGT)	**67.7**	2	40	mg/Kg	06/28/19	07/01/19	TW	
TPH (C6 to C12) (SGT)	ND	2	20	mg/Kg	06/28/19	07/01/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*105*	*50-150*	*10g used, Spike amount changed to 20ppr*

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 13:04 **Site:**
Sample #: **416458-032** **Client Sample #:** F-AST SS-04@8 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg	06/28/19	07/01/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg	06/28/19	07/01/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg	06/28/19	07/01/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*104*	*50-150*	

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 13:11 **Site:**
Sample #: **416458-034** **Client Sample #:** F-AST SS-05@3 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	**62.8**	1	10	mg/Kg	06/28/19	07/01/19	TW	
TPH (C29 to C 40) (SGT)	**64.8**	1	20	mg/Kg	06/28/19	07/01/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg	06/28/19	07/01/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*109*	*50-150*	

Matrix: Solid **Client:** ENGEO Inc. **Collector:** Client
Sampled: 06/19/2019 13:22 **Site:**
Sample #: **416458-035** **Client Sample #:** F-AST SS-05@8 **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015M	Prep Method: EPA 3580A					QCBatchID: QC1203701		
TPH (C13 to C28) (SGT)	ND	1	10	mg/Kg	06/28/19	07/01/19	TW	
TPH (C29 to C 40) (SGT)	ND	1	20	mg/Kg	06/28/19	07/01/19	TW	
TPH (C6 to C12) (SGT)	ND	1	10	mg/Kg	06/28/19	07/01/19	TW	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*107*	*50-150*	

QCBatchID: QC1203701 **Analyst:** Abanh **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 06/28/2019 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1203701MB1						
TPH (C10 to C28) (SGT)	ND	mg/Kg		10		
TPH (C13 to C28) (SGT)	ND	mg/Kg		10		
TPH (C29 to C 40) (SGT)	ND	mg/Kg		20		
TPH (C6 to C12) (SGT)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203701LCS1											
TPH (C10 to C28) (SGT)	250		193		mg/Kg	77			36-138		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1203701MS1, QC1203701MSD1												**Source: 416458-011**
TPH (C10 to C28) (SGT)	ND	500	500	386	383	mg/Kg	77	77	0.8	70-130	30	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

From: Adrianna Lundberg
To: Diane Galvan
Subject: Re: Shady View, Enthalpy Analytical Final Report #416458
Date: Friday, June 28, 2019 11:29:44 AM
Attachments: image001.png

Thank you, Diane. Could we please also analyze a few samples that we have on hold? Please also analyze the following samples for 8015 TPH-DRO and MORO with silica gel cleanup:
E-AST SS01@3 and E-AST SS01@8,
E-AST SS02@3 and E-AST SS02@8,
F-AST SS04@3 and F-AST SS04@8,
and F-AST SS05@3 and F-AST SS05@8.

Thank you,
Adrianna Lundberg
Project Engineer, ENGEO
949.579.2268