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Cypress Creek Renewables – High Top Solar Project Draft Geotechnical Report

ANS Geo, Inc. is pleased to provide this Draft Geotechnical Report (Report) to Cypress Creek Renewables (CCR) to summarize the results of our geotechnical field investigation in support of the proposed High Top Solar project located in Moxee, Washington. To guide the design and construction of the proposed solar facility, ANS Geo developed and implemented a geotechnical investigation program which encompassed a brief desktop study of local geologic conditions, soil borings, test pit excavations, field electrical resistivity testing, preliminary environmental due diligence sampling, laboratory thermal resistivity testing, and laboratory soil material testing.

It is expected that the successful EPC selected to perform final design and construction will perform supplemental investigations and studies, including pile load testing, to confirm the information presented and develop more detailed information which may be required for the final design.

1. Methodology

1.1 Soil Borings

ANS Geo retained Elite Drilling Services (EDS) of Denver, Colorado to advance 13 soil borings completed at select locations across the project site between November 30 and December 7, 2020. The soil boring locations are depicted in the Investigation Location Plan, provided as **Attachment A**. It should be noted that the original scope of work included 26 soil borings, however; shallow rock was encountered throughout the site. Therefore, during our investigation program it was agreed between ANS Geo and CCR that test pit excavations would be better suited to observe geologic conditions in replacement of soil borings at several locations. As such, soil boring and test pit IDs may appear interchanged and/or missing (ie. TP-01, TP-02, B-03, TP-04, etc.).

Each soil boring was advanced to practical refusal, generally encountered between 1.2 and 7.5 feet below ground surface (BGS). A track-mounted Mobile B-57 drill rig was used to collect soil samples using the Standard Penetration Test (SPT) Method through hollow-stem augers in accordance with ASTM Standard D1586. Soil samples were collected continuously to the termination depth in each boring. Soil borings, proposed by ANS Geo and confirmed by Cypress Creek review, were distributed to provide site coverage at locations throughout the project's array areas. One boring was situated within the proposed substation footprint (B-SS-1). At this substation location (B-SS-1), rock coring was conducted using a wireline setup in accordance with ASTM D2113 to confirm the presence and quality of bedrock. All soil borings were overseen and logged by an ANS Geo representative under the direction of a Professional Engineer licensed in the State of Washington. Typed soil boring logs are presented within **Attachment B**.

At select soil boring locations, auger cuttings were collected within four (4) feet of grade with the purpose of obtaining bulk soil samples for laboratory California Bearing Ratio (CBR), thermal resistivity testing (TRT), and corrosivity testing. Upon completion, each borehole was backfilled to its existing grade with soil cuttings.

1.2 Test Pits

As discussed in the previous section, 13 test pits were excavated by EDS at select locations across the project site between December 3 and 4, 2020. The test pit locations are depicted in the Investigation Location Plan, provided as **Attachment A**.

All test pits were excavated using a John Deere 26G excavator and were overseen and documented by a ANS Geo geotechnical representative under the direction of a Professional Engineer licensed in the State of Washington. Soil strata changes, soil classification, and excavation depths were documented during each test pit excavation and are presented within the test pit logs provided as **Attachment C**. Test pits were all excavated to bedrock which was encountered between 2.0 and 5.2 feet below grade. Similar to soil boring locations, bulk samples were collected from select test pits for laboratory testing. Upon completion, each test pit excavation was backfilled with native soil cuttings, bucket-tamped, and tracked over with the excavator to minimize any post-excavation settlement.

1.3 Electrical Resistivity Testing

As part of our field investigation program, ANS Geo performed field Electrical Resistivity Tomography (ERT) testing on October 28 and 29, 2020. Testing was conducted at 12 locations within the proposed array area(s) and one (1) location within the proposed substation footprint. In-situ soil resistivity measurements were obtained by utilizing the Wenner 4-Pin Method in accordance with ASTM G57 and IEEE Standard 80.

Two (2) mutually perpendicular traverses were collected at each location utilizing "a"-spacings of 1, 1.5, 2, 3, 4.5, 7, 10, 15, 22.5, 35, 50, and 75 feet within the array areas, with additional 100 and 150-foot spacings at the substation location. Test results are presented as **Attachment D**.

2. Geology and Subsurface Conditions

ANS Geo conducted a brief, desktop review of surficial and bedrock geology maps and reports made available by the United States Geological Survey (USGS) prior to conducting our field investigation. The available mapping indicates that the site lies within Quaternary nonmarine deposits. This particular surficial unit includes eolian deposits consisting of light brown, homogenous loessial silt with minor gravel, boulders, and sand inclusions.

Bedrock geology of the area consists of Miocene volcanic rocks Unit from the Middle Miocene age. The unit is generally known as Yakima ballast, and locally interchanged with Columbia River Basalts. The bedrock is described as dark-gray to black, dense, aphanitic basalt flows; commonly columnar jointed Dark-gray to black, dense aphanitic basalt flows; commonly columnar jointed, less commonly irregularly and platy jointed; some flows vesicular, grading to scoriaceous; includes minor pillow lava, palagonite beds, and interbedded soil profiles and sedimentary beds; contains diatomite beds locally. Maximum thickness in south-central Washington may be in excess of 10,000 feet; much thinner in western Washington, where flows are mostly associated with marine sedimentary rocks. Includes acidic and intermediate volcanic rocks in northern Cascade Mountains. The mapped surficial unit is mostly consistent with the findings of our field investigations.

ANS Geo has provided the generalized subsurface conditions within Table 1 based upon the observations made during our geotechnical investigation for the High Top Solar project. Soil boring and test pit logs have been provided as **Attachments B** and **C**, respectively, and should be reviewed for specific soil condition observations.



Average Depth (ft)	Material	Average Consistency	Description
0' – 0.5'	Topsoil	-	Approximately four (4) to 12 inches of topsoil existed at the surface throughout most of the project area.
0.5 – 3'	Silt (ML)	Stiff	Light brown silt with varying amounts of sand, gravel, and clay were encountered beneath the topsoil layer in most locations. This material was noted to be very dry and predominantly nonplastic. Gravels and rock fragments were frequently encountered near the bottom of this stratum.
3'-4'	Gravel / Cobbles (GM)	Very Dense	Dense silty gravel and/or cobbles were frequently encountered beneath the silt layer.
4' +	Basalt	-	Strong, slightly weathered basalt bedrock was encountered or inferred at all investigation locations beginning between one (1) and 7.5 feet below grade.

Table 1 – Generalized Subsurface Profile

3. Geotechnical Laboratory Results

3.1 Soil Index Testing

Representative soil samples were collected during our investigation and submitted to ANS's accredited materials testing laboratory. A summary of the index laboratory test results is provided within Table 2. As-received laboratory test results are included within **Attachment E**.

Location ID	cation ID Sample ID Depth (feet) % Gravel % Sand		% Sand	% Fines		% Moisture		
Location ID	Sample ID	Depth (feet)	% Graver	% Sanu	% Silt	% Clay		
TP-01	G-1	1 – 3	0	21.9	78.1		5.2	
B-09	S-1	0 – 2	20.3	29.7	50).0	6.0	
B-11	S-2	2 – 4	20.3	29.0	50.7		6.8	
B-14	S-1	0 – 2	0.6	21.2	78	3.2	4.7	
B-16	S-1	0 – 2	0	19.4	40.6	40.0	4.6	
B-16	G-1	1 – 3	0	34.9	65	5.1	5.9	
TP-18	G-1	1 – 3	0	30.3	69).7	-	
B-23	S-4	6 – 8	57.4	25.5	17	'.1	6.1	
B-SS-1	S-1	0 – 2	0	21.0	40.9	38.1	7.5	

Table 2 – Soil Index Testing Summary

3.2 Thermal Resistivity Testing

ANS Geo collected bulk samples from six (6) investigation location between one (1) and four (4) feet below grade for laboratory testing of Thermal Resistivity. Soils were collected in a five-gallon bucket and delivered to ANS Consultants' accredited laboratory for testing. The soil was compacted to 85 percent of its Standard Proctor Density in accordance with ASTM D698, and Thermal Resistivity Testing was conducted in accordance with IEEE Standard 442-2017. Results of the thermal testing are summarized within Table 3. Complete, asreceived results have been provided within **Attachment E**.



		Thermal Resistivity Values at Various Moisture Contents					Received	
Location ID	Location ID Material Type	% water	% water	% water	% water	% water	Moisture Content (%)	Re-Molded Dry Density (lb/ft³)
		(°C-cm/W)	(°C-cm/W)	(°C-cm/W)	(°C-cm/W)	(°C-cm/W)		
TP-02	Silt with cobbles	0	4.0	8.0	12.0	15.5	3.8	02.9
(1' – 2.5')	(ML)	746	298	177	136	120	3.0	92.8
TP-06	Silt with cobbles	0	4.0	8.0	12.0	16.7	3.5	90.4
(1' – 3')	(1' – 3') (ML)	752	305	184	146	129	3.5	
B-11	Silt, some gravel	0	3.5	7.0	10.5	14.9	6.5	95.4
(2' – 4')	' – 4') (ML)	738	382	228	190	181		
TP-18	Silt, some sand	0	3.0	6.0	9.0	11.5	4.3	93.8
(1' – 2.5')	(ML)	726	271	148	110	96	4.5	
TP-20	Silt, little sand	0	4.0	8.0	12.0	16.3	5.6	04.5
(1' – 3') (ML)	652	229	122	95	79	5.0	91.5	
TP-21	Silt, little sand	0	4.0	8.0	12.0	16.4		89.8
(1' – 3') (ML)	784	352	215	172	158	6.8	09.0	

 Table 3 – Thermal Resistivity Testing Summary

3.3 Corrosivity Testing

ANS Geo collected additional samples from one (1) to three (3) feet below grade for corrosivity testing. The results of the testing, completed by ANS Consultants, have been summarized within Table 4 and are detailed within **Attachment E**.

			, ,		
Location ID	рН	Sulfate (mg/kg)	Chloride (mg/kg)	Soil Box (Calculated Resistivity) (Ω/cm)	Redox Potential (mV)
TP-02	6.33	38	30	11,000	204
B-03	6.71	3	35	3,000	217
TP-06	6.75	72	170	5,000	213
B-09	6.91	3	40	9,000	202
B-14	6.65	7	25	7,600	194
B-15	7,00	17	30	8,500	200
B-17	6.85	11	30	8,900	205
TP-18	6.77	28	40	8,000	196
B-19	6.96	17	35	11,000	153
TP-21	6.82	24	80	8,500	208
B-23	7.01	27	45	9,000	186
B-25	7.12	9	40	9,500	193

Table 4 – Corrosivity Testing Summary



3.4 California Bearing Ratio

ANS Geo collected an additional sample at three (3) locations from one (1) to three (3) feet below grade for testing of California Bearing Ratio (CBR) in accordance with ASTM D1883. The results of the testing, completed by ANS Consultants, have been summarized within Table 5 and are detailed within **Attachment E**.

	Bearing radio earninary
Location ID	CBR Ratio (%)
TP-01	2.6
B-16	1.8
TP-20	2.6

Table 5 – California	Roaring	Patio	Summan	,
i able 5 – California	Bearing	Ratio	Summary	I

4. Environmental Sampling

As part of our work, we were notified by CCR that State of Washington Energy Facility Site Evaluation Council (ESFEC) may require a soil contamination report for the project facility. The purpose of this would be to evaluate if there are any areas of subsurface contamination within the project area (oil stains, contamination tests, abandoned equipment, etc.), if these impacted areas of soil and/or groundwater will be disturbed during construction and operations, and how the contamination will be mitigated.

At the start of our work, ANS Geo was provided a Phase I Environmental Site Assessment (ESA) dated September 25, 2020 by TRC. The Phase I ESA identified two "recognized environmental conditions" ("RECs") within the project site boundaries. The locations of each REC are provided in Figure 1, which is extracted from TRC's Phase I assessment.

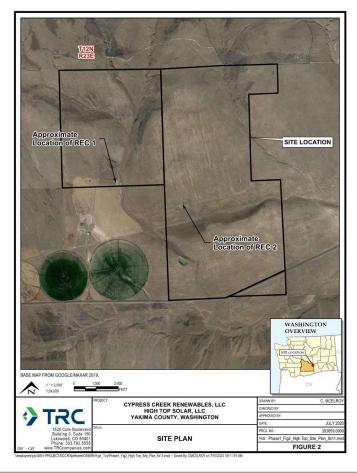


Figure 1 – Location of RECs



4.1 Description of RECs

Both of the RECs appear to be remnants of debris left behind from former agricultural use, and are described in further detail by TRC as follows:

- **REC 1**: During the Site Reconnaissance, in the northwest parcel of the Site, to the east of the northsouth oriented access roadway, TRC observed small patches of apparent oil-stained soil and numerous unlabeled containers (5-gallon buckets, 55-gallon drums, and other smaller containers), both partially full and empty. A few were placed on wooden pallets; however, others did not have any secondary containment. In this location, TRC also observed storage tanks, including one tank that was cut open and empty, rubber tires, piles of drilling mud, household items, as well as several vehicles and abandoned equipment, including a water truck and drilling rig. TRC noted a general petroleumlike odor in this area. TRC considers the number of containers, lack of secondary containment for these containers, lack of labels indicating the contents of many of these containers, and oil-stained soil to represent a REC for the Site.
- REC 2: During the Site Reconnaissance, near the center of the Site, TRC observed another drilling rig, an abandoned (engine removed) vehicle-mounted crane, three (3) 55-gallon drums, apparent oilstained soil, and miscellaneous materials and trash. Two (2) of the drums were unlabeled and tipped over, adjacent to approximately 50-square feet of apparent oil-stained soil. TRC considers the tipped over 55-gallon drums, lack of labels indicating the contents of the drums, and oil-stained soil to represent a REC for the Site.

4.2 Evaluation Methodology

Recognizing the two REC areas, ANS Geo proposed and conducted a sampling and evaluation methodology during our investigation program as follows:

- 1. In each targeted REC area (REC-1 and REC-2), advance one soil boring to a depth of 10 feet.
- 2. Perform continuous sampling throughout the boring depth, and utilize a MiniRae 3000 photoionization detector (PID) to screen each depth for any indications of volatile organic content readings.
- 3. Visually screen soil samples for staining, discoloration, foreign debris (man-made fill), as well as note any odors.
- 4. Separate samples at discrete intervals (typically two-foot intervals [0-2', 2-4', etc.]) and preserve each sample in glass jars.
- 5. Using the PID equipment and observations, target the highest reading for environmental testing. If none of the samples were observed to have a reading or visual/odor marker, take a near-surface sample (0-2 foot depth) and perform a full environmental test suite for volatile organics, semi-volatile organics (BTEX, MTBE, typical gas/diesel range organics), and metals.
- 6. To evaluate background conditions (outside of the "REC" areas), a second, grab sample was taken outside the ESA-delineated area at/near the surface. This sample also had a full environmental test to create the "background" sample.
- 7. In between samples, and after finishing each boring, de-contaminate sampling equipment using Alconox.

Using this evaluation method and procedure, ANS Geo collected several samples for environmental analyses as part of our investigation program. The targeted area samples (REC-1 and REC-2) were collected using soil borings, while background grab samples were collected at TP-01 and TP-24 to provide "background" levels. These select samples were submitted to Cascade Analytical, a USEPA-accredited environmental laboratory, for testing in accordance with their respective methods and standards. A summary of the compounds detected, and their concentration, is presented within Table 6. Complete environmental sampling results are provided within **Attachment F**.



Compounds	REC-1A (0'-1')	REC-1B (0'-1')	REC-2A (0'-1')	REC-2B (0'-1')	TP-01 (1'-2')	TP-24 (1'-2')
Arsenic	-	-	4.7	4.8	6.2	4.8
Cadmium	-	-	-	0.15 J	0.11 J	0.14 J
Chromium	-	-	12	14	26	18
Lead	-	-	11	10	9.0	8.4
Mercury	-	-	0.0071 J	0.021 J	0.022	0.019 J
#2 Diesel	-	-	26 J	-	-	-
Gasoline	100	9.0 J	-	-	-	-
Motor Oil	-	-	220	100	29 J	33 J
Bis(2-ethylhexyl) phthalate	18,000	-	240 J	-	-	-
Di-n-octyl phthalate	-	-	-	27 J	-	-
m-Xylene & p-Xylene	-	-	0.77 J	1.8 J	-	-
Methylene Chloride	-	-	-	14 J	-	-
Naphthalene	-	-	8.7 J	13	41 B	9.1 J B
Pyrene	1,500	-	-	-	-	-
Toluene	-	-	1.9 J	6.5 J	-	-

Table 6 – Summary of Environmental Exceedances

Table Notes

Only concentrations above their respective method detection limits are summarized

- Concentrations in bold text are greater than or equal to their respective reporting limits.

All concentrations are reported in mg/Kg (parts per billion).
 J = approximate value

B = compound detected in both blank and sample

4.3 Discussion of Environmental Considerations

ANS Geo notes that the compounds identified and observed include non-significant concentrations of gasoline and/or oil-related products in addition to low levels of metals. These exceedances are generally typical of industrial farming activities, largely localized and contained to areas of current or former equipment, drum, or material storage. At the time of our investigation program, and as indicated in TRC's July 2020 site visit for the Phase 1 ESA, these compounds were evident with minor staining in some locations and appeared to be localized within the near-surface (0-2 foot depth) soils. Based on our field observations, it is our opinion that these impacts do not reach deeper soil horizons due to the shallow thickness of overburden soil before encountering hard, massive basalt rock. In addition, groundwater was not observed in any of our boreholes or test pits during our subsurface investigation; therefore, impacts to groundwater are not expected.

Based on the results of our investigation, it is our opinion that the shallow, localized impacted soils can be remediated using a simple excavate and re-place technique. If development is proposed in either area where REC-1 and REC-2 exist, we recommend that the soil within a ten-foot radial offset of historic, remnant drums or buckets be excavated to a depth of three feet below grade, then staged on-site prior to final off-site managing and proper disposal. A grab sample should be taken at the bottom of the excavation at each of the discrete, separate excavation areas to test for the full suite of environmental contaminants, including volatile organics, semi-volatile organics (BTEX, MTBE, typical gas/diesel range organics), and metals. If the environmental results show de minimum compounds and level of impact, the excavation can be stopped at this depth. If results show similar remnants of gasoline and/or oil-related products in addition to low levels of metals, the excavation may be extended an additional one-foot (or to top of rock, if encountered), and the sampling and evaluation procedure repeated.

It is recommended that an impermeable liner or tarp be placed on the ground surface to act as containment for the excavated and staged soil. The liner should be draped over and surrounded by hay bale or similar side barriers to provide horizontal containment. The material should be covered using similar tarp or liner, and the top liner secured to ground, to prevent precipitation from wetting the excavated materials.



Once the material is excavated and properly contained/staged, a composite, grab sample of the stockpile should be collected and tested for the full suite of environmental contaminants. The sample results will allow for proper determination of the end-disposal or environmental resource recovery facility which can accept lightly-impacted soil material.

5. Seismic Site Classification

Based on the observations recorded within our subsurface investigation program and utilizing the N-Value method as prescribed in Chapter 20 of ASCE 7-16, Site Class C, at minimum, can be assumed as the average condition across the project site.

The following Site Class C seismic ground motion values were obtained from the USGS Seismic Hazard Maps, referenced in ASCE 7-16 Standard, for this site:

- 0.2 second spectral response acceleration, Ss= 0.425 g
- 1 second spectral response acceleration, S1= 0.173 g
- Maximum spectral acceleration for short periods, S_{MS} = 0.552 g
- Maximum spectral acceleration for a 1-second period, S_{M1}= 0.260 g
- 5% damped design spectral acceleration at short periods, S_{DS} = 0.368 g
- 5% damped design spectral acceleration at 1-second period, S_{D1} = 0.173 g

5.1 Preliminary Seismic Evaluation

The designated seismic site class is anticipated based on results from our limited investigation program and using select areas of the site which have been investigated by ANS Geo. Backup data for the site class determination is provided as **Attachment G**. Based on our observation of subsurface conditions, estimated Site Class rating, and review of USGS's 2018 National Seismic Hazard Map, ANS Geo concludes that there is a low to moderate risk of significant seismic activity which may impact the proposed solar facility.

6. Foundation Considerations

ANS Geo anticipates that, as typical with solar farm construction, embedded posts, such as W6x9 H-piles, will be used to support the proposed solar panels. Conventional shallow foundations such as sonotubes, spread footings, or similar systems may also be utilized for equipment pads and associated support structures.

6.1 Corrosion Considerations

Given the soil's measured acidity, sulfate and chloride concentrations, resistivity, and redox potential summarized in **Section 3.3** (Table 4), in consideration with the soil and moisture conditions observed, the influence of corrosion attack on embedded steel piles is considered to be generally mild to moderate.

6.2 Frost & Adfreeze Considerations

Within Yakima County, Washington, frost depth is mapped to exist at approximately 18 inches below grade. As such, ANS Geo recommends that all structural foundations be founded at 18 inches (1.5 feet) below grade or deeper to ensure adequate protection from frost conditions which may jeopardize the integrity of subgrade soils and associated substructure.

Given the location of the project and soils encountered, the potential for frost heave against post foundations should be considered. Fine-grained soils, or granular soils with greater than 10 percent fine-grained content are frost-susceptible due to the inability of entrapped moisture from infiltrating or evaporating prior to freezing.



Trapped moisture will begin to create ice lenses, which will grip the steel posts or embedded structures, followed by ice-jacking due to frost heave. The phenomenon is more commonly referred to as "adfreeze stress", which can be considered as an external, upward force applied to the post. The magnitude of the upward force will depend on the depth/thickness of the frost zone, the interface bond stress between embedded structure/material and the surrounding area, and the surface area of the structure/material in contact with this bond stress. As predominantly silty soils were observed near grade, ANS Geo recommends that an unfactored adfreeze (uplift) stress of 1,500 pounds per square foot (10.4 psi) be considered for the upper 1.5 feet of overburden soil during panel foundation sizing and design.

6.3 Recommended Soil Parameters

Based on our interpretation of the subsurface conditions observed within our limited investigation program, and the laboratory testing results, ANS Geo recommends that the soil parameters, as depicted within Table 7, be considered for preliminary design purposes.

Depth	Material	Total Unit Weight	Internal Friction Angle	Cohesion	Soil Modulus (k)	Soil Strain (E₅0)	Allowable Bearing Capacity	Allowable Side Resistance
0' – 1.5'	Topsoil / Upper Silt	95 lb/ft ³	20°	0 lb/ft ²	20 lb/in ³	-	300 lb/ft ²	0 lb/ft ²
1.5' – 3'	Silt (ML)	105 lb/ft ³	31°	0 lb/ft ²	100 lb/in ³	-	2,000 lb/ft ²	50 lb/ft ²
3' – 4'	Gravel (GM)	120 lb/ft ³	35°	0 lb/ft ²	250 lb/in ³	-	4,000 lb/ft ²	100 lb/ft ²
4' +	Basalt (bedrock)	140 lb/ft ³	37°	0 lb/ft ²	500 lb/in ³	0.001	6,000 lb/ft ²	400 lb/ft ²

Table 7 – Recommended Preliminary Soil Parameters

ANS Geo recommends that allowable side resistance within the upper 1.5 feet be neglected due to anticipated surficial disturbance, and adfreeze stresses as noted in **Section 6.2** should be considered. These allowable capacities and resistances provided are based on a serviceability limit of one-inch of maximum deflection/settlement. It should also be noted that these parameters have been established based on our engineering judgment. A detailed investigation program, including pile load testing, should be performed to confirm and calibrate these values prior to construction.

7. Construction Recommendations

7.1 Excavation

Based on the encountered subsurface conditions and anticipated foundation configurations, some excavations may extend deeper than four feet below grade. As such, excavations deeper than four feet should be shored or sloped and benched, in accordance with OSHA regulations, to ensure safe working conditions within the excavations. For benching purposes, overburden soils may be considered as "Type C" material and should be sloped no steeper than 1.5H:1V (horizontal to vertical). Intact basalt bedrock, if deemed stable, may be vertically cut within shallow temporary excavations and trenches. OSHA soil classifications should be field-determined by the contractor's "competent person" prior to excavation. Any proposed shoring systems should be designed by the contractor's "competent person", be certified by a Professional Engineer licensed in the State of Washington, and should be submitted to the engineer for review.

The contractor should expect cobbles, boulders, and bedrock within shallow excavations and earthwork activities. ANS Geo notes that pre-drilling for post locations to clear cobbles, boulders, and bedrock should be anticipated and is further discussed in **Section 7.6**.



7.2 Dewatering

ANS Geo did not encounter groundwater at the time of our investigation program. Notwithstanding, the contractor should be prepared to manage any perched water and/or infiltrated stormwater as needed using localized pump-and-sump or similar techniques to allow for concrete foundation construction in-the-dry. Water discharge should be managed in compliance with applicable state and local regulations. The contractor should be sure to grade the surface as necessary to divert stormwater away from open excavation to the extent possible.

7.3 Subgrade Preparation

Prior to the installation of shallow concrete foundations, ANS Geo recommends overexcavating the subgrade by at least four (4) inches, lining the exposed material with a geotextile separation fabric, and bringing the subgrade back up to the design foundation elevation with compacted structural fill as specified within Table 8. Native material beneath the separation fabric should be inspected for unsatisfactory conditions such as standing water, frozen soil, organics, or deleterious materials. Should any unsatisfactory conditions exist within the native subgrade, the excavation should be undercut an additional four inches (8 total inches beneath proposed foundation depth) prior to placement of the geotextile separation fabric.

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Sieve Size	Percent Passing					
3-inch	100					
1 ½-inch	60 – 100					
No. 4	30 – 60					
No. 200	0 – 10					

Structural fill material should be placed in loose lifts not exceeding eight (8) inches in height and be compacted to at least 95 percent of its Modified Proctor Density in accordance with ASTM D1557.

7.4 Backfilling and Re-use of Native Soils

ANS Geo notes that native fine-grained soils (silts) on site will likely be difficult to handle, place, and compact without proper moisture conditioning and protection. ANS Geo recommends the following measures be considered to reduce the adverse impacts of moisture-sensitive soils:

- Positive measure should be implemented and maintained to intercept and direct surface water away from moisture-sensitive subgrade surfaces.
- Subgrade surfaces should be sloped and, as appropriate, seal-rolled to facilitate proper drainage. Surfaces should be properly prepared in anticipation of inclement weather. Moisture should not be allowed to collect on subgrade surfaces.
- To the extent practical, the limits of exposed subgrade soils should be minimized.
- Construction traffic should be limited to properly constructed haul roads.
- Disturbed soils should be removed and replaced with compacted controlled fill material.
- In place moisture contents should be maintained with two percent wet/dry of the optimum moisture content as determined by the Modified Proctor Test (ASTM D1557).

These soils may be re-used across the project area for fill in landscaped areas; however, it should not be used under or above foundations or load-bearing structures where typically imported structural fill is used. Native material used as backfill for cable trenches should be handled and placed at a moisture content at or above its optimum value to ensure representative thermal properties are maintained.

In areas around and above installed foundations, large utilities, and other buried site features, ANS Geo recommends importing a clean granular material with less than 15 percent fine-grained content for use as general backfill. General backfill material should not be used beneath any load-bearing structures and should



be placed in loose lift thicknesses not exceeding 12 inches and be compacted to at least 95 percent of its Modified Proctor Density (ASTM D1557). Soil used as backfill should not be handled when frozen and should be free of excessive moisture, organics, and deleterious material.

In fill areas beneath foundations, access roads, and load-bearing structures, ANS Geo recommends structural fill as described in **Section 7.3** and Table 8.

7.5 Access Roads

ANS Geo understands that an access road will likely be required to enter and exit the project site as well as provide access to the equipment pad locations. It is also our understanding that this access road will likely be unpaved, to accommodate occasional light vehicular traffic such as utility pickup truck or similar vehicle. As such, ANS Geo recommends that access roads be constructed with at least six (6) inches of crushed stone as specified within Table 9.

Sieve Size	Percent Passing
1 ½-inch	100
³⁄₄-inch	55 – 90
No. 4	25 – 50
No. 50	5 – 20
No. 200	3 – 10

Prior to roadway construction, the subgrade should be stripped of vegetation and topsoil, and be proof-rolled with at least four (4) roundtrip passes of a smooth-drum roller with a minimum operating weight of eight (8) tons. The prepared subgrade should be confirmed to maintain a minimum CBR value of 10. Although not anticipated, if required, additional stabilization may be obtained through chemical treatment of the subgrade including introduction of lime or cement. Crushed stone should be placed in loose lifts not exceeding eight (8) inches in height and be compacted to at least 95 percent of its Modified Proctor Density (ASTM D1557).

7.6 Pile Drivability

ANS Geo anticipates that, as typical with solar farm construction, solar panels will be supported by steel H-Piles (wide-flanged sections) driven to approximately 8 to 10 feet below grade. It is ANS Geo's professional opinion that the parameters provided in **Section 6.3** may be used to preliminarily size the proposed piles, however, piles should be axially and laterally load tested to confirm their capacities at representative locations prior to final design and construction. These steel piles are typically installed via direct-push, vibration, and/or percussive hammer methods.

Based on our observations within our investigation program, we expect that regular obstructions or refusals associated with bedrock, cobbles, and/or boulders will be encountered as shallow as two feet below grade. As such, ANS Geo recommends that the contractor pre-drill all proposed post locations. We recommend that pre-drilled holes be completed to a diameter slightly smaller than the diagonal dimension of the proposed pile section to ensure a tight fit once the pile is driven to its targeted depth. For example, a six (6)-inch diameter hole may be drilled and utilized for W6x9 section (approx. 7.1-inch diagonal measurement). The contractor should be aware, however, that heavier sections (ie. W6x12 or W6x15) may have limiting "bending" capacity in its flanges, and therefore require a hole of a slightly larger proportion.



8. Limitations

ANS Geo notes that the findings and recommendations presented within this Draft Geotechnical Report are based on our limited investigation program conducted in October through December 2020 and our engineering judgment. A load testing program should be completed prior to conducting a detailed post foundation design. Should the scope of the project or proposed site layout change, ANS Geo should be given the opportunity to review the applicability of the collected information and modify our recommendations, as needed.

We sincerely appreciate the opportunity to support this project, and please feel free to contact us should you have any questions regarding the findings of this Report.

Yours Truly,

1-state

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Gin Paul

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Attachments

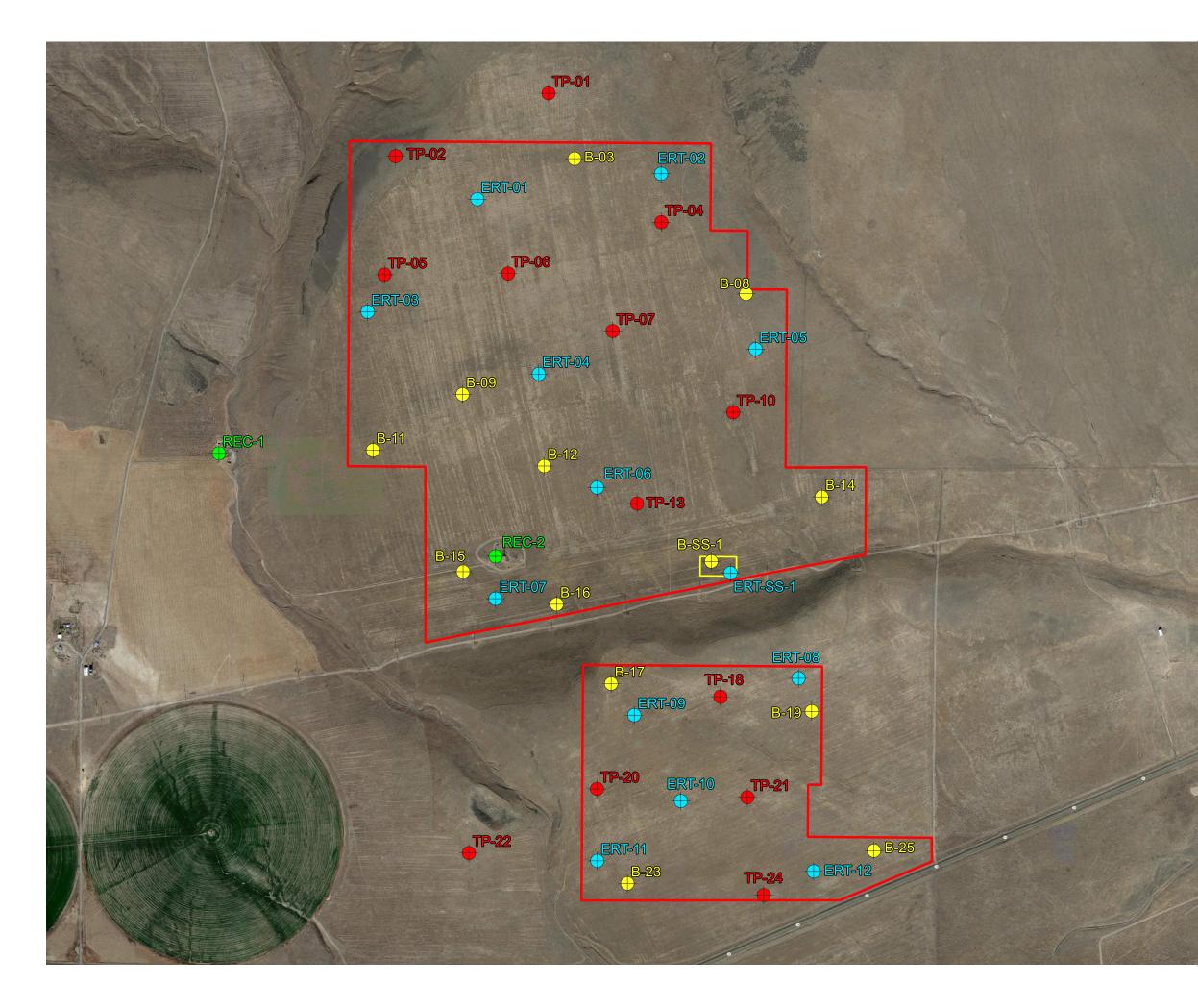
- Attachment A Investigation Location Plan
- Attachment B Soil Boring Logs
- Attachment C Test Pit Photo Logs
- Attachment D Electrical Resistivity Results
- Attachment E Geotechnical Laboratory Test Results
- Attachment F Environmental Sampling Results
- Attachment G Seismic Support Data



Attachment A

Investigation Location Plan





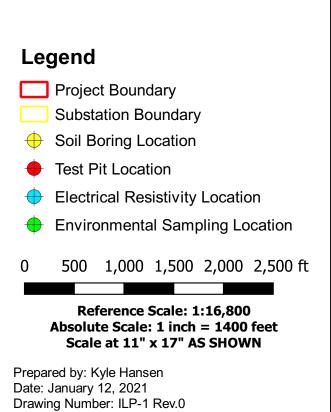


Client:



INVESTIGATION LOCATION PLAN

CYPRESS CREEK RENEWABLES HIGH TOP SOLAR PROJECT MOXEE, WASHINGTON



Attachment B

Soil Boring Logs



AN	I S <mark>G</mark>	FO						SOI	L BORING LO	CG						BORING NO.: B-03
Project Locatio Client:	t: on:	High To Moxee, V Cypress	Vashingt Creek R	enewabl	es					Project No.: Project Mgr: Field Eng. Staff		_	N/A N/A Mihi	ir Sł		Page 1 of 1
Drilling Driller/	g Co.: Helper:		ling Serv ecminek /							Date/Time Star Date/Time Finis		-			,	<u>0 at 11:45 am</u> 0 at 12:05 pm
	n: Grade ft		cal Datum			Borin	g Location:	See Boring L	ocation Plan	Batorrino		_				Long: -119.973456°
Item Type		Casing HSA	Samp SS		e Barrel	Ria M	ako & Mode	el: Mobile B-	57	Hammer Type			ntal D ng Flu		n: NAD 19 Drill Ro	
Length		5 ft	2 f			🗆 Tru	ick 🗆	Tripod	Cat-Head	□ Safety	□в	lent	onite			Casing Advance
Inside Di Hammer		4.25 140	1.37			🗹 AT 🗹 Tra		Geoprobe Air Track	Winch Roller Bit	Doughnut						Hollow Stem Auger
Hammer		30	30			□ Ski			Cutting Head		N N	lone)			
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic	Symbo	1	co option	Density/con nstituents, p al descriptio	ual Identification & De nsistency, color, Group particle size, structure, ons, geologic interpreta	Name, moisture,	Dilatancy		_	ft		Remarks
-	S-1 0.0'- 2.0'	9	3 9 50/5"		GM	0.4	trace fine S Auger Refu Offset, aug	, light brown and, dry (GM sal at 2 feet I er refusal at 1	3GS.	AVEL, some Silt,		-	-	-	PID = 0 Subround	led cobble at surface.
-							End of Bori	ng at 2 feet B	GS. soil cuttings.							
— 5 —																
-																
-																
-																
15																
-																
-																
		Water Le			I		Sample	Type	Notes:						I	
Date	Time	Elapsed Time (hr)		oth in fee Bottom of Hole	Matar	-1'	Open En Thin-Wa	d Rod Il Tube	PID = Photo Ioniza Groundwater not e	ation Detector encountered at time	e of bo	orin	g			
						U e		oed Sample								
					<u> </u>	S G	Grab Sar	on Sample nole								
	st Legend	Tou	tancy: ghness:	L - Lo	w M-N	Slow /lediur	R - Rapio n H - Hig	י ל h	Dry Strength: N - No	Non-Plastic L - Lo one L - Low M - I	Mediu	Im	Η-	Hig	H - High h VH - V	o.: B-03 ery High
							netrometer tion within li	mitations of s) "ppa" denotes soil sampl ampler size. 4.) Soil ide							methods per ASTM D2488.

AN	J S _G	EO						SO	IL	BORING	LO	G							BORING NO.: B-08 Page 1 of 1	
Project Locatio Client: Drilling	t: on: g Co.:	High To Moxee, V Cypress Elite Dril	Nashingt Creek Re Iling Serv	enewable ices	es							Project No.: Project Mgr: Field Eng. Staf Date/Time Star	ted:		D	/A lihir ece		er 1, 202	0 at 12:10 pm	
	Helper:		ecminek / cal Datum									Date/Time Finis	_		-				0 at 12:35 pm	
Item	1: Grade ft	Casing	Samp		e Barrel	Boring	g Location	1: See Boring	Loca	ation Plan								1: NAD 19	Long: -119.966328°	
Туре		HSA	SS		-			del: Mobile B	3-57			Hammer Type	D	rilli	ing	Flui		Drill Ro	d Size:	
Length	- (***)	5 ft	2 f		-		ck [Cat-Head		□ Safety							Casing Advance	
Inside Di Hammer		4.25 140	1.37			Tra		Geoprobe Air Track		Winch Roller Bit		Doughnut Automatic				er			Hollow Stem Auger	
Hammer		30	30		-	C Ski				Cutting Head		□		Nor	ne					
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic			C	(Density/co onstituents,	onsi: par	Identification & stency, color, Gro ticle size, structu s, geologic interp	oup N ure, m	lame, noisture,	Dilatancy	Т	Toughness D	_	Dry Strength St		Remarks	
-	S-1 0.0'- 1.2' 0.3'-'	9	3 11 50/3"		GM	1.2	little fine S Spoon Re	e, light browr Sand, dry (GN fusal at 1.25	1) feet		GRAV	EL, some Silt,			-	-	-	PID = 0 Gravel is	Basalt.	
- - - - - - - - - - - - - - - - - - -	Time	Water Le Elapsed Time (hr)		oth in fee Bottom of Hole	Wator	0	Auger Ref Offset Aug End of Bo Borehole I	iusal at 1 foot ger Refusal al ring at 1.25 fe backfilled with backfilled with	t BGS t 1 fc eet B	S. pot BGS. IGS. Il cuttings.		on Detector countered at time	e of b	l						
						Г Т - U	Thin-Wa	all Tube rbed Sampl				oountereu at uffit		J	чų					
					I	s		oon Sample	e											
	st Legend	Tou	tancy: ghness:	L - Lo	w M-N	Mediun	Grab Sa R - Rap n H - Hig	id gh	Dr	ry Strength: N	- Non	on-Plastic L - Lo ne L - Low M - I	Mediu	um		-	m l High	H - High ı VH - V	o.: B-08 ery High	
		enotes soil ım Particle						r reading. 2 limitations of		pa" denotes soil sa pler size. 4.) Soi									methods per ASTM D24	88.

AN	JSG	EO						SOI	L BORING LC	DG							BORING NO.: B-09
Project		High To	n Solar							Project No.:			N//	Δ			Page 1 of 1
Locatio			Washing	ton						Project Mgr:			N//				
Client:		Cypress	Creek R	enewable	es					Field Eng. Staf	f:		Mil	hir :	Shah		
Drilling		Elite Dri	lling Serv	vices						Date/Time Star	ted:						at 10:50 am
	Helper:		ecminek							Date/Time Fini	-						at 11:25 am
Item	 Grade ft 	Casing	ical Datum Sam		e Barrel	Bori	ng Location	: See Boring L	ocation Plan							IAD 1983	ng: -119.978113°
Туре		HSA	SS	6	-	Rig I	Make & Mod	lel: Mobile B-	57	Hammer Type			ng F			rill Rod	Size:
Length Inside Di	a (in)	5 ft 4.25	2 f		-	TI M	uck [] Tripod] Geoprobe	Cat-Head Winch	□ Safety □ Doughnut			tonit /mer		_		Casing Advance
Hammer	Wt. (lb.)	140	140	0	-	TI		Air Track	Roller Bit	Automatic		Wat	ter			H	ollow Stem Auger
Hammer	Fall (in.)	30	30		-		kid 🗌]	Cutting Head				d To	oot			
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic		5	co optior	(Density/cor onstituents, p nal descriptio	Lal Identification & Des Insistency, color, Group Darticle size, structure, r Dans, geologic interpretat	Name, moisture,	Dilotonov		<i>"</i>	_	Dry Strength 6		Remarks
	S-1	13	2	<u></u>		0.5	(6") - TOP	SOIL			•			-	-		
	0.0'- 2.0'		3 11		ML		Stiff, light Gravel, dry	brown SILT, so	ome coarse to fine Sand, so	ome coarse to fine	<u> </u>	-	- -	-) = 0 avel is Ba	ealt
_	0.5'-'		19				Glavel, ul										isait
	1.5'-'					2.0					· ·	•	- ·	-	- Au BG		ing from 1.5 to 3 feet
_	S-2	9	20	PXL	GM		Very dens (GM)	e, light brown	to gray Silty coarse to fine (GRAVEL, dry	·	•	- -	-	-		
	2.0'- 3.0'		50/3"	6 P.K		3.0	. ,										
								usal at 3 feet E ring at 3 feet B									
							Borehole b	backfilled with	soil cuttings.								
Ű																	
_																	
_																	
-																	
_																	
10																	
-																	
-																	
-																	
-																	
15																	
-																	
-																	
			evel Data	oth in fee	t to:	\top	Samp	е Туре	Notes:	tion Deta-t							
Date	Time	Elapsed Time	Bot. of	Bottom		_ 0			PID = Photo lonizat Groundwater not en		e of b	ori	ng				
		(hr)		of Hole	Wate	-1'	Thin-Wa						-				
						U		bed Sample									
					[oon Sample									
						G	Grab Sa	ппріе							Bor	ring No.	B-09
Field Te	st Legend	1: Dila	tancy:				/ R - Rapi		Plasticity: NP - N	Ion-Plastic L - Lo	w N	1 - 1	Med	lium	n H-	High	
NOTES:	1) "nnd" d		ghness:				ım H - Hiç enetrometer		Dry Strength: N - No) "ppa" denotes soil sample	one L-Low M-		_	_	_	-		y riign
									ampler size. 4.) Soil ider								thods per ASTM D2488.

AN	J S _G	EO					SOIL	BORING LO	G							BORING NO.: B-11 Page 1 of 1
Project	:	High To	p Solar						Project No.:			N/	/A			Fage TOTT
Locatio	on:	Moxee, \	Nashingt	on					Project Mgr:			N	/A			
Client:	-		Creek R		es				Field Eng. Staff:					Sha		
Drilling	J Co.: Helper:		lling Serv ecminek /						Date/Time Start Date/Time Finis							<u>0 at 10:00 am</u> 0 at 10:30 am
	neiper. 1: Grade ft		cal Datum			Borin	ng Location: See Boring Lo	ecation Plan	Date/Time Finis	_		-				Long: -119.981836°
Item		Casing	Samp		e Barrel		- ·								: NAD 19	
Type Length		HSA 5 ft			-	Rig N	Make & Model: Mobile B-5 uck	7 Cat-Head	Hammer Type			ing l ntoni		d	Drill Ro	d Size: Casing Advance
Inside Di		4.25	1.37	5	-	🗹 AT	TV 🛛 Geoprobe	Winch	Doughnut		Pol	yme				Hollow Stem Auger
Hammer Hammer		140 30	140		-	Tra		 Roller Bit Cutting Head 	Automatic							· · · · · · · · · · · · · · · · · · ·
	Sample							al Identification & Des	cription	_		ld T	es	ts		
Depth/ Elev.	No./	Rec.	Sample Blows	Stratum			(Density/con:	sistency, color, Group N	Name,		~	SSS	~	ngth		Remarks
(ft)	Interval (ft)	(in)	per 6"	Graphic	Symbo			article size, structure, n ns, geologic interpretati			Dilatancy	Toughness	Plasticity	Dry Strength		
	S-1	14	2			+	(8") - TOPSOIL			i	ā -	ř.	ā.		PID = 0	
	0.0'- 2.0'	14	2	<u>, 1,</u>		0.6	()					-	-		Rock stud	ck in tip of spoon. nding from 1.5 to 2 feet
-	0.0-2.0		15		ML		coarse to fine Gravel, dry	ray SILT, some coarse to fi (ML)	ine Sand, some						BGS.	nuing from 1.5 to 2 leet
			15													
-	S-2	0	50/2"		L ML	2.2	ר NO RECOVERY, Assume		r		-	-	-	-		
	2.0'- 2.2'				`	-		o fine Sand, some coarse	to fine Gravel, dry							
-							Auger Refusal at 3 and 4	feet BGS in Boring and off	set location.							
							End of Boring at 2.2 feet I Borehole backfilled with s	oil cuttings.								
-																
-																
_																
_																
_																
10																
-																
-																
-																
15																
.0																
-																
-																
		Water Le					Sample Type	Notes:								
Date	Time	Elapsed Time		oth in fee Bottom		0	Open End Rod	PID = Photo lonizati Groundwater not en		of ł	oori	ina				
		(hr)		of Hole		- '	Thin-Wall Tube					.9				
						U U	Undisturbed Sample									
							Split Spoon Sample									
	G Grab Sample Boring No.: B-11															
Field Te	st Legend		tancy: ghness:						on-Plastic L - Lov ne L - Low M - N							erv Hiah
NOTES:	1.) "ppd" de		•					"ppa" denotes soil sample								
							ation within limitations of sa									methods per ASTM D2488.

ΑN	J S _G	EO						SO	L BORING L	_00	G							BORING NO.: B-12 Page 1 of 1
Project		High To	p Solar								Project No.:			N	/A			Page 1 of 1
Locatio			Washingt	on							Project Mgr:			Ν	/A			
Client:			Creek R		es						Field Eng. Staff					Sh		
Drilling			Iling Serv								Date/Time Star							0 at 9:15 am
	Helper: 1: Grade ft		ecminek / ical Datum			_		<u> </u>			Date/Time Finis	-		_				<u>0 at 9:40 am</u> L ong: -119.974719°
Item	. Glade It	Casing	_		e Barrel	Bor	ing Location	: See Boring I	Location Plan								1: NAD 19	-
Туре		HSA	SS		-			lel: Mobile B			Hammer Type	_		ing		id	Drill Ro	
Length Inside Di	a. (in.)	5 ft 4.25	2 ft 1.37		-] Tripod] Geoprobe	Cat-Head		Safety Doughnut							Casing Advance
Hammer	Wt. (lb.)	140	140		-	🗹 Т	rack [Air Track	Roller Bit		Automatic		Wa	ater				Hollow Stem Auger
Hammer		30	30		-				Cutting Head		□			ne eld ⁻	Tes	ts		
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic		>	c	(Density/co	ual Identification & C nsistency, color, Grou particle size, structure ons, geologic interpre	up N e, m	ame, oisture,		Т		Plasticity	Dry Strength		Remarks
	S-1	14	3 4	<u>,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, </u>	1	0.0							-	-	-	-	PID = 0 Gravel is	Basalt.
-	0.0'- 2.0'		10 25		GM		Medium de fine Sand,		own to gray Silty coarse t	to fine	e GRAVEL, little						Auger gri	nding at 1.5 feet BGS.
-	S-2	7	32		GM			e, gray coarse	e to fine GRAVEL, little S	Silt, tra	ace fine Sand,		-	-	-	-		oon broke on sample 2.
-	2.0'- 2.7'		50/3"			2.7	Auger Ref	usal at 2.5 fee	et BGS. Auger Refusal at 1.5 fee	et BG	iS.						Gravel is	Basalt.
_							End of Bo	ring at 2.75 fe	et BGS. soil cuttings.									
_																		
— 5																		
-																		
-																		
-																		
_																		
10																		
_																		
_																		
-																		
-																		
15																		
-																		
_																		
-																		
_																		
			evel Data				Sampl	е Туре	Notes:									
Date	Time	Elapsed Time (hr)	Bot. of	oth in fee Bottom of Hole	Wato	- c r 1	•		PID = Photo Ioni Groundwater no			e of b	oor	ing				
		. /				Ξi		rbed Sample	e									
						- s		oon Sample										
						4	Grab Sa	mple									Boring N	o.: B-12
Field Te	st Legend		tancy: ghness:				w R-Rapi um H-Hig				n-Plastic L - Lo e L - Low M - I					m	H - High	
		enotes soil	sample av	erage diar	netral po	cket	penetrometer	reading. 2	.) "ppa" denotes soil sam	nple a	average axial pocke	et per	netr	ome	eter	read	ing.	
								limitations of	sampler size. 4.) Soil i	identi	fications and field	tests	bas	sed	on	/isua	I-manual I	nethods per ASTM D2488.

AN	JSG	EO					SOI	L BORING LO	G						BORING NO.: B-14
Project		High To	n Solar						Project No.:			N/A			Page 1 of 1
Locatio			Washing	ton					Project Mgr:			N/A			
Client:				enewable	es				Field Eng. Staff				r Sh		
Drilling	g Co.: Helper:		Iling Serv ecminek						Date/Time Start Date/Time Finis						<u>0 at 1:05 pm</u> 0 at 1:41 pm
	neiper. 1: Grade ft		ical Datun	0		Borin	g Location: See Boring Lo	ocation Plan	Date/Time Fillis						Long: -119.963182°
Item		Casing			e Barrel		.							1: NAD 19	
Type Length		HSA 5 ft	2 f		-	🗆 Tru		Cat-Head	Hammer Type			g Flu nite	lia	Drill Ro	d Size: Casing Advance
Inside Di Hammer		4.25 140	1.37		-	🗹 AT 🗹 Tra		Winch Roller Bit	Doughnut Matomatic	D Po					Hollow Stem Auger
Hammer		30	30		-			Cutting Head		M N	one				
Depth/	Sample		Sample		USCS		Visual - Manu	al Identification & Des	cription	Fi	ield	Tes			
Elev.	No. / Interval	Rec. (in)	Blows	Stratum Graphic	Group	5		nsistency, color, Group N particle size, structure, n		cy	ness	ity	rength		Remarks
(ft)	(ft)	()	per 6"		Symbo			ons, geologic interpretati		Dilatancy	Toughness	Plasticity	Dry Strength		
	S-1	20	3	<u>, 1 1 /</u>			(8") - TOPSOIL			-	-	-	-		
	0.0'- 2.0'		3 3	┝᠇ᡝ᠇ᡃ	ML	0.6	Medium stiff, light brown	SILT, some medium to fine	e Sand, dry (ML)	۰.	-	-	-	PID = 0	
-	0.6'-'		3												
						2.0									
	S-2	12	4 17	e X D	GM		Very dense, light brown t medium to fine Sand, dry	to gray Silty coarse to fine G ((GM)	GRAVEL, little	-	-	-	-	Gravel is	Basalt.
_	2.0'- 4.0'		50/5"	5 PIC			inculain to into cana, ary	((()))							
				[0h											
-				[0]											
	S-3	5	29 50/2"	65d	GM		Very dense, light brown t medium to fine Sand, dry	to gray Silty coarse to fine G ((GM)	SRAVEL, trace	-	-	-	-		nding from 4 to 6 feet BGS.
	4.0'- 6.0'			þγ₽										Auger cut Gravel.	tings are angular Basalt
				6 P.C	-										
-	S-4	6	34		GM		Venudense light brown o	coarse to fine GRAVEL, littl	o modium to fino			-		Gravel is	Basalt
	6.0'- 7.0'	Ū	50/2"				Sand, little Silt, dry (GM)				-	-			nding from 6 to 7 feet BGS.
-	0.0 - 7.0			р <u>Р</u> К		7.0	Auger Refusal at 7 feet B	BGS.		_					
							End of Boring at 7 feet B Borehole backfilled with	GS.							
-								5							
-															
10															
- 10															
_															
-															
-															
-															
15															
F											1				
-															
											1				
											1				
		Motor	Nol D-4-			_	Comple Trees	Notos							
		Elapsed	evel Data De	oth in fee	t to:		Sample Type	Notes: PID = Photo lonizati	ion Detector						
Date	Time	Time (hr)	Bot. of	Bottom of Hole	Wate	r o T	Open End Rod Thin-Wall Tube	Groundwater not er		of bo	oring	9			
		("")	casing				Undisturbed Sample								
						s	Split Spoon Sample								
						G	Grab Sample							Daria	D 44
Field Te	st Legend	l d: Dila	itancy:	I N - No	I one S-	- Slow	R - Rapid	Plasticity: NP - No	on-Plastic L - Lov	N M	- M	ediu			o.: B-14
		Tou	ighness:	L - Lo	w M-I	Mediur	n H-High	Dry Strength: N - Nor	ne L-Low M-N	/lediu	m	H -	High	n VH-V	ery High
								"ppa" denotes soil sample ampler size. 4.) Soil iden							nethods per ASTM D2488.

AN	J S _G	EO							SOI	L BORING I	LO	G						BORING NO.: B-15		
Project		High To	n Solar									Project No.:			N/A			Page 1 of 1		
Locatio			Washingt	ion								Project Mgr:		-	N/A					
Client:			Creek R		es							Field Eng. Staff			Mih		hah			
Drilling	g Co.:	Elite Dri	Iling Serv	ices								Date/Time Start	ed:	_	Νοι	/em	ber 30, 20	020 at 1:10 pm		
	Helper:		ecminek /									Date/Time Finis						20 at 8:45 am		
Elevation	 Grade ft 	Casing	ical Datum		re Barrel	Bori	ng Locatio	on: See	Boring L	ocation Plan							6.531084° I m: NAD 19	Long: -119.978090°		
Туре		HSA	SS	6	-	Rig	Make & M	odel: M	lobile B-{	57		Hammer Type			ng Fl		Drill Ro			
Length Inside Di	a (in)	5 ft 4.25	2 ft 1.37		-	□ т Г А		□ Trip □ Geo		Cat-Head		Safety Doughnut			onite	;		Casing Advance		
Hammer		140	140	0	-	M T				Roller Bit		Automatic	Οv	Vate	er			Hollow Stem Auger		
Hammer	Fall (in.)	30	30		_ <u>-</u>		kid			Cutting Head		□				- 4 -	ᆛ			
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic		p		(Den constite	nsity/cor uents, p	ual Identification & nsistency, color, Gro particle size, structur ons, geologic interpr	oup N re, m	ame, oisture,	Dilatancv		Plasticity	ff	,	Remarks		
	S-1	16	2	<u>`^{ / / </u>	<u></u>	+	(6") - TC	PSOIL					ē	Ĕ	<u> </u>	ο Δ	<u> </u>			
	0.0'- 2.0'	10	3		́ МL	0.5			ht brown	SILT, little fine Sand, o	drv (M	1)	-1				PID = 0			
-			4				wedum	sun, nyi	III DIOWII	SILT, IIIIe IIIle Saild, C	u y (ivi	L)			1	1	FID = 0			
	0.5'-'		5																	
-	S-2	14	14	\mathbb{L}	} GM	2.0		nso ligh	t brown i	to grav coarse to fine G		I little medium	_							
-	2.0'- 4.0'	14	18 50/5"				Very dense, light brown to gray coarse to fine GRAVEL, little medium to fine Sand, little Silt, dry (GM) PID = 0 Auger grinding from 2.5 to 4 fee BGS.													
-	S-3	16	43 26		GM															
<u> </u>	4.0'- 6.0'		20 21 20	\mathcal{O}	>															
_	S-4 6.0'- 7.2'	10	26 32		GM					to fine GRAVEL, little r	mediu	m to fine Sand,	-	-	-	-				
-			50/3"	fal d`	—	GM Very dense, gray coarse to fine GRAVEL, little medium to fine Sand, - - -														
-																				
-																				
<u> </u>																				
-																				
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-																				
- 15																				
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-																				
-																				
-																				
			evel Data	oth in fee	at to:	T	Sam	ple Ty	pe	Notes:		n Data -t-								
Date	Time	Elapsed Time	Bot. of	Bottom	Wato	_ 0	•	End Ro		PID = Photo Ion Groundwater no		on Detector countered at time	e of b	orir	g					
		(hr)		of Hole		- '		Nall Tu							-					
					+	ΗU			Sample											
					—	s		Spoon S												
						G	Grab	Sample	;								Boring N	o.: B-15		
	st Legend	Tou	itancy: ighness:	L - Lo	ow M-I	Mediu	v R-Ra um H-H	İigh		Dry Strength: N -	Non	n-Plastic L - Lov e L - Low M - N	Mediu	Im	Н-	Hig	H-High gh VH-V			
			sample av Size is det) "ppa" denotes soil sar ampler size. 4.) Soil								methods per ASTM D2488.		

AN	J S _G	EO						SOI	L BORING I	LO	G						BORING NO.: B-16
Project Locatio Client:	t: on:	High To Moxee,	p Solar Washing Creek R		es						Project No.: Project Mgr: Field Eng. Staff		_	N/A N/A Mihi		ah	Page 1 of 1
Drilling			Iling Serv								Date/Time Star		-				20 at 11:20 am
	Helper: 1: Grade ft		ecminek . ical Datum			Borin	a Location	1: See Boring I	ocation Plan		Date/Time Finis		_				<u>20 at 11:50 am</u> Long: -119.974201°
Item	_	Casing	Sam		e Barrel		-	, i i i i i i i i i i i i i i i i i i i				Hor	izor	ntal D	Datur	n: NAD 19	83
Type Length		HSA 5 ft			-	Rig N		del: Mobile B-	57		Hammer Type Safetv			ng Flu onite		Drill Ro	d Size: Casing Advance
Inside Di		4.25 140	1.37	75		🗹 AT	V [Geoprobe	Winch		Doughnut	D F	olyı	ner			Hollow Stem Auger
Hammer Hammer		30	30		-	Tra		Air Track	□ Roller Bit ☑ Cutting Head		Automatic						· ·
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic	Symbo	>	c optio	(Density/co onstituents, j nal descriptio	ual Identification & I nsistency, color, Gro particle size, structur ons, geologic interpr	oup N re, m	lame, oisture,	Dilatancy		Plasticity D	ft		Remarks
	S-1	24	2 3	<u></u>			(9") - TOP	SOIL				-	-	-	-		
-	0.0'- 2.0' 0.8'-'		3 4		ML	0.8	Medium s	tiff, light browr	n Clayey SILT, little fine	Sand	, dry (ML)	-	-	-	-	PID = 0	
-	S-2 2.0'- 4.0'	18	3 4 17 19		ML		Very stiff, (ML)	light brown Sa	Gravel st BGS.	uck in tip of spoon at 2 feet							
-	S-3	5	50/5"	 ₽₩€	GM	4.0	Very dens	e, gray to light	t brown coarse to fine G	GRAVE	EL, little Silt,		.	_	-	Gravel is	Basalt fragments.
— 5	4.0'- 4.5'					4.5	Auger Ret End of Bo	Sand, dry (GN fusal at 4.5 fee ring at 4.5 fee	et BGS. t BGS.		/					Heavy au feet BGS	ger grinding from 4 to 4.5
-							Borenole	backfilled with	soil cuttings.								
-																	
-																	
-																	
10																	
-																	
-																	
-																	
-																	
- 15																	
-																	
-																	
-																	
-																	
		Mater				+	0	a T	Natari								
Date	Time	Water Le Elapsed Time (hr)	Dep Bot. of	oth in fee Bottom of Hole	Wato	о Г Т	Open E	le Type nd Rod all Tube	Notes: PID = Photo Ion Groundwater no		on Detector countered at time	e of b	orir	g			
			casing				Undistu	rbed Sample									
					S Split Spoon Sample G Grab Sample Boring No.: B-16												
	st Legend	Tou	tancy: ghness:	L - Lo	w M-N	Vediu	R - Rap m H - Hi	gh	Dry Strength: N -	- Non	n-Plastic L - Lo e L - Low M - I	Mediu	Im	Η-	ım Higl	H-High 1 VH-V	
	<u>1.) "ppd" de</u> 3.) Maximu								.) "ppa" denotes soil sar sampler size. 4.) Soil								methods per ASTM D2488.

AN	J S G	EO						SOI	L BORING LO	G							BORING NO.: B-17
Project		High To	p Solar							Project No.:			N	J/A			Page 1 of 1
Locatio			Washing							Project Mgr:				J/A			
Client:			<u>Creek R</u> Iling Serv		es					Field Eng. Sta Date/Time Sta					<u>Sh</u>		0. at 2:40 pm
Drilling Driller/	Helper:		ecminek							Date/Time Sta							20 at 2:40 pm 20 at 3:20 pm
	1: Grade ft		ical Datum			Bori	ng Location:	See Boring L	_ocation Plan		_		_			,	Long: -119.971936°
Item Type		Casing HSA	Sam SS		e Barrel	Pia	Make & Mode	I. Mobilo P	57	Hammer Type			onta			n: NAD 19 Drill Ro	
Length		5 ft	2 f	ť	-	ПТ	uck 🗆	Tripod	Cat-Head	□ Safety		Be	entor	nite			Casing Advance
Inside Di Hammer		4.25 140	1.37		-	M A M T		Geoprobe Air Track	Winch Roller Bit	Doughnut Automatic			olym ater				Hollow Stem Auger
Hammer		30	30		-				Cutting Head			No	one		.		
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic		5) cor optiona	Density/co nstituents, al descriptio	ual Identification & Des nsistency, color, Group I particle size, structure, n ons, geologic interpretati	Name, noisture,		Dilatancy	Toughness D	Plasticity 59 L	Dry Strength		Remarks
	S-1	14	3	<u></u>		0.5						-	-	-	-		
_	0.0'- 2.0'		4 5		ML		Stiff, brown Sand, dry (N		oarse to fine Gravel, little me	edium to fine		-	-	-	-	PID = 0 Basalt fra	gments in tip of spoon.
	0.5'-'		50/5"					,									
-	S-2	5	15		GM	2.0		light brown	to gray coarse to fine GRAV	/EL como Cilt				-		Gravel is	Basalt
		5	15 50/1"		GM			and, dry (GN		VEL, SOME SIII,		-	-	-	-	Gravel Is	Basait.
-	2.0'- 3.0'			p MK		3.0		sal at 3 feet	BGS.		-						
							Offset Auge	er Refusal at ng at 3 feet E	2.5 feet BGS.								
-									soil cuttings.								
— 5																	
_																	
-																	
-																	
10																	
-																	
_																	
-																	
15																	
-																	
[
-																	
		Water Le	evel Data			+	Sample	Type	Notes:								
Data	Time	Elapsed	Dep	oth in fee		-0			PID = Photo Ionizat			he	ri				
Date	Time	Time (hr)	Bot. of Casing	Bottom of Hole		г_т	Thin-Wal		Groundwater not er	ncountered at tin	ie of	100	ring				
						Jυ	Undisturb	oed Sample									
						s		on Sample									
						G	Grab San	nple								Boring N	o.: B-17
Field Te	Image: Section of the sectio																
NOTES	1.) "baa" (.1		ghness: sample av				IM H - HIGI enetrometer r		Dry Strength: N - Nor) "ppa" denotes soil sample								ery rign
							ation within lir										methods per ASTM D2488.

AN	JSG	EO						sc	DIL	BORING L	.0	G							BORING NO.: B-19	
Project Locatio Client: Drilling	t: on:	High To Moxee, ' Cypress	p Solar Washing Creek R Iling Serv	enewabl	es							Project No.: Project Mgr: Field Eng. Staff Date/Time Star		-		۹ hir ۹	Shal		Page 1 of 1	-
	Helper:		ecminek									Date/Time Star							0 at 2:20 pm	-
	1: Grade ft	Vert	ical Datun	າ:		Bori	ng Locatio	on: See Borin	g Loc	ation Plan			Coc	ord.	: L	at:	46.5	27091° L	ong: -119.963602°	-
Item Type		Casing HSA	Sam SS		e Barrel	Ria	Vake & M	odel: Mobile	B-57			Hammer Type			ntal I ng Fl			NAD 198 Drill Roo		
Length		5 ft	2 f	ť	-	ПТ	uck	Tripod	1	Cat-Head		□ Safety		Bent	tonite	е		Dimito	Casing Advance	
Inside Di Hammer		4.25 140	1.3		-	A A		Geoprobe		Winch Roller Bit		Doughnut Automatic		⊃oly Nat					Hollow Stem Auger	
Hammer		30	30		-					Cutting Head				Non	е					
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Graphic	Symbo	5	opti	(Density/c constituents onal descrip	consi s, par	Identification & C stency, color, Grou ticle size, structure s, geologic interpre	up N e, m	lame, oisture,	Dilatancv		Plasticity D	:	Dry Strength S		Remarks	
	S-1	14	2 3	<u></u>	4	0.6	(8") - TC	PSOIL					-	• •	- -		-			
_	0.0'- 2.0' 0.6'-'		3 10		ML		Medium	stiff, light bro	wn SI	LT, little medium to fi	ine S	and, dry (ML)	-	. .	- -		- F	PID = 0		
-	S-2 2.0'- 3.5'	7	13 50/5"		GM	2.0	Very der	nse, light brov to fine Sand,		gray Silty coarse to fir GM)	ne Gl	RAVEL, little	-	. .			I A	Gravel is I Auger grir 3GS.	Basalt. Iding from 2 to 3.5 feet	
-				- D E	ν	3.5	Auger R End of E	efusal at 3.5 f oring at 3.5 fe backfilled w	eet BO	GS.										
— 5																				
_																				
-																				
-																				
10																				
-																				
-																				
-																				
-																				
-																				
-		Water Le	avel Data				Sam	ple Type		Notes:										
-	_	Elapsed	De	oth in fee				End Rod		PID = Photo Ioni										
Date	Time	Time (hr)	Bot. of Casing			г о т т _ U	Thin-V	End Rod Vall Tube urbed Samj	ple	Groundwater no	ot en	countered at time	e of b	orir	ng					
						s	Split S	poon Samp	le											
						G	Grab \$	Sample									R	orina N	D.: B-19	
Field Te	st Legend		tancy:				/ R - Ra					n-Plastic L - Lo					n H	l - High		
NOTES	1) "nnd" -		ghness:				IM H-F	-				e L - Low M - I					-		ery High	
	<u>1.) "ppd" d</u> 3.) Maximu							er reading. n limitations o		p <mark>a" denotes soil sam</mark> pler size. 4.) Soil i									nethods per ASTM D2488	

AN	JSG	EO						SO	L BORING LO	OG							BORING NO.: B-23	
Project		High To	n Solar							Project No.:				J/A			Page 1 of 1	
Locatio			Washing	on						Project Mgr:				<u>√/A</u>				
Client:				enewable	s					Field Eng. Sta	ff:		Ν	/ihi	r Sh	ah		
Drilling			lling Serv							Date/Time Sta							0 at 8:10 am	
	Helper:		ecminek	<u> </u>						Date/Time Fir			_				0 at 8:45 am	
Item	1: Grade ft	Casing	ical Datum Sam		Barrel	Borin	g Locatio	n: See Boring I	Location Plan							n: NAD 19	Long: -119.971260°	
Туре		HSA	SS	;	-			del: Mobile B		Hammer Type	0	Dril	ling	j Flu		Drill Ro	d Size:	
Length Inside Di	a. (in.)	5 ft 4.25	2 f		-	🗆 Trı 🗹 AT		□ Tripod □ Geoprobe	Cat-Head	□ Safety □ Doughnut			ntor Iym				Casing Advance	
Hammer	Wt. (lb.)	140	140)	-	🗹 Tra	ack	Air Track	Roller Bit	Automatic		Wa	ater				Hollow Stem Auger	
Hammer		30	30		-	□ Sk			Cutting Head					Tes	sts			
Depth/	Sample No. /	Rec.	Sample	Stratum	USCS				ual Identification & De nsistency, color, Group		F				ft			
Elev. (ft)	Interval	(in)	Blows per 6"	Graphic	Group Symbo			constituents,	particle size, structure,	moisture,		Dilatancy	Toughness	Plasticity	Dry Strength		Remarks	
	(ft)								ons, geologic interpreta	ation, Symbol)	i	Dilat	Tou	Plas	Dry			
	S-1	15	2 2	<u>`'''`````````````````````````````````</u>		0.5	(6") - TO					-	-	-	-	PID = 0 Basalt fra	gments in tip of spoon.	
_	0.0'- 2.0'		3		ML		Medium Sand, dr		n SILT, some fine Gravel, li	ittle medium to fine								
			13															
_		40					T (10)											
	S-2	16	9 14		ML				SIL I, some fine Gravel, litti	le medium to fine		-	-	-	-			
-	2.0'- 4.0'		50/4"		CM	3.0	Dettem (4") Light brow	n to annu occase to fine CC		_					Crevelie	Deselt	
	3.0'-'				GM					AVEL, IIIIe SIII,		-	-	-	-	Graveris	Dasan.	
-	S-3	6	50/6"	PJA	GM		Verv den	se light brown	to grav coarse to fine GRA	VFI little medium			_			Gravelie	Basalt	
	4.0'- 6.0'	U	30/0	$\circ Q \square$			to fine Sa	and, little Silt, d	ry (GM)				-	-	-			
<u> </u>	4.0 - 0.0																	
				6 g														
-	S-4	6	50/6"	$b \chi \mathcal{V}$	GM		Verv den	se. light brown	to grav coarse to fine GRA	VEL. some coarse		-	-	-	-			
	6.0'- 6.5'					6.5	to fine Sa	and, little Silt, d	ry (GM)		\neg							
-							Auger Re	efusal at 6.5 fee	et BGS.									
				GM Bottom (4") - Light brown to gray coarse to fine GRAVEL, little Silt, GM Very dense, light brown to gray coarse to fine GRAVEL, little medium GM Very dense, light brown to gray coarse to fine GRAVEL, little medium to fine Sand, little Silt, dry (GM) GM Very dense, light brown to gray coarse to fine GRAVEL, little medium to fine Sand, little Silt, dry (GM) GM Very dense, light brown to gray coarse to fine GRAVEL, little medium to fine Sand, little Silt, dry (GM)														
-																		
				Sand, drý (MĽ) 3.0 GM Bottom (4") - Light brown to gray coarse to fine GRAVEL, little Silt, trace medium to fine Sand, dry (GM) GM Very dense, light brown to gray coarse to fine GRAVEL, little medium to fine Sand, little Silt, dry (GM) GM C GM GM Cery dense, light brown to gray coarse to fine GRAVEL, little medium to fine Sand, little Silt, dry (GM) GM C GM GM Cery dense, light brown to gray coarse to fine GRAVEL, some coarse GM C GM C GM Cery dense, light brown to gray coarse to fine GRAVEL, some coarse GM C GM C Cery dense, light brown to gray coarse to fine GRAVEL, some coarse GM C GM C Cery dense, light brown to gray coarse to fine GRAVEL, some coarse C GM C GM C Cery dense, light brown to gray coarse to fine GRAVEL, some coarse C C C C C C C C C C C C C C C C C C C														
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			evel Data		t to:	1	Sam	ole Type	Notes:	tion D. t i								
Date	Time	Elapsed Time	Bot. of	oth in fee Bottom		-0	Open I	End Rod	PID = Photo loniza Groundwater not e		ne of l	bor	ing					
		(hr)		of Hole	Wate	-1'		/all Tube					3					
						U ا		urbed Sample										
						= s	Split S Grab S	poon Sample Sample										
						G		•									o.: B-23	
Field Te	st Legend		tancy: ghness:				R-Ra m H-H			Non-Plastic L - L one L - Low M ·							erv High	
	1.) "ppd" de	enotes soil	sample av	verage diar	netral po	cket pe	enetromete	er reading. 2	.) "ppa" denotes soil sampl	le average axial poc	ket per	netr	rom	eter	read	ding.		
								n limitations of									nethods per ASTM D2488.	

AN	JSC	EO							SOI	L BORING	LO	G							BORING NO.: B-25
Project Locatio Client:	t: on:	High To Moxee,	Washing	ton Renewable	 es							Project No.: Project Mgr: Field Eng. Sta	ff:		Ν	I/A I/A /lihir	r Sha	 ah	Page 1 of 1
Drilling			illing Serv									Date/Time Sta							20 at 9:10 am
	Helper: 1: Grade ft		ecminek ical Datum				<u> </u>				-	Date/Time Fin		_					<u>20 at 9:45 am</u> Long: -119.961013°
Item	I: Grade II	Casing			e Barrel	Bor	ring L	ocation: See E	Joring L	ocation Plan								n: NAD 19	<u> </u>
Туре		HSA	SS	3	-			e & Model: Mo				Hammer Type	1	Dril	ling	Flu		Drill Ro	d Size:
Length Inside Di	a. (in.)	5 ft 4.25	2 f		-		Truck ATV	Tripo Geore		Cat-Head		☐ Safety ☐ Doughnut			ntor Ivm				Casing Advance
Hammer		140 30	140		-	1	Track	☐ Air T	rack	Roller Bit		Automatic		Wa No	ater				Hollow Stem Auger
Hammer		30		<u></u>	<u>-</u>		Skid			Cutting Head						Tes	sts	<u> </u>	
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratum Graphic		p		(Dens constitu	sity/cor ients, p	al Identification & nsistency, color, G particle size, struct ons, geologic interp	roup N ure, m	lame, ioisture,		Dilatancy	Toughness	Plasticity	Dry Strength		Remarks
	S-1 0.0'- 2.0'	24	2	<u>, 1,</u> 1,		1.		p (12") - TOPS	OIL					-	-	-	-	PID = 0	
-			2 12		ML			') - Light brown	Sandy	SILT, dry (ML)									
				6¥D	GM	-	-	ottom (6") - Gra	y coarse	e to fine GRAVEL, so	me Sil	t, dry (GM)							
_	S-2 2.0'- 4.0'	8	18 50/3"		GM			ery dense, light ice medium to		to gray coarse to fine nd, dry (GM)	GRAV	EL, little Silt,		-	-	-	-	Gravel is Auger gri	Basalt. nding from 2 to 6 feet BGS.
	S-3 4.0'- 6.0'	7	40 50/4"		GP	4.	Ve	ery dense, light fine Sand, trac		to gray coarse to fine ry (GP)	GRAV	EL, little medium		-	-	-	-	Gravel is	Basalt.
-	S-4 6.0'- 6.1'	1	50/1"		GP	6.	Ve me	edium to fine S	and, tra	to gray coarse to fine lice Silt, dry (GP)	GRAV	EL, trace	_	-	-	-	-	Gravel is	Basalt.
_ _	0.0 0.1						Au En	boon Refusal at liger Refusal at lid of Boring at l prehole backfille	6 feet B 6 feet B	BGS. GS.									
_																			
— 10 —																			
_																			
-																			
- 15																			
_																			
-																			
_																			
		Waterla	evel Data	<u> </u>	<u> </u>	+		Sample Typ	<u>e</u>	Notes:							Ш		
Date	Time	Elapsed Time		pth in fee				pen End Ro		PID = Photo Io		on Detector countered at tim	e of	bor	rina				
		(hr)		of Hole		- '	JU	hin-Wall Tub Indisturbed S plit Spoon Sa	Sample					_ 01	9				
						_		Grab Sample	hie									_	
Field To	Boring No.: B-25 Beld Test Legend: Dilatancy: N - None S - Slow R - Rapid Plasticity: NP - Non-Plastic L - Low M - Medium H - High																		
		Tou	ighness:	L - Lo	w M-I	Medi	ium	H - High			- Non	ie L-Low M-	Med	liun	n H	H - I	High	n VH-V	/ery High
																			methods per ASTM D2488.

AN	J S _G	EO						SO	NL	BORING L	.00	G						BORING NO.: B-SS-1 Page 1 of 1
Project		High To	p Solar									Project No.:			N/A			Page 1 of 1
Locatio			Washing	ton								Project Mgr:		_	N/A			
Client:			Creek R		oles							Field Eng. Staff:	:	_	Mihi	r Sł	nah	
Drilling			Iling Serv									Date/Time Start		_				0 at 11:15 am
	Helper: 1: Grade ft		ecminek ical Datun									Date/Time Finis		_				0 at 12:30 pm Long: -119.967774°
Item	I. Grade II	Casing			ore Barrel	Borin	ig Locati	on: See Boring	g Loc	ation Plan							n: NAD 19	
Туре		HSA	SS	6	NQ			odel: Mobile E				Hammer Type	Dr	illin	g Flı	Jid	Drill Ro	d Size:
Length Inside Di	a. (in.)	5 ft 4.25	2 f		- ft 1.875	🗆 Trı 🗹 AT		Tripod Geoprobe		☐ Cat-Head ✔ Winch		☐ Safety ☐ Doughnut	D B					Casing Advance
Hammer	Wt. (lb.)	140	14	0	-	🗹 Tra	ack	Air Track	Π	Roller Bit		Automatic	Πw	/ate	r			Hollow Stem Auger
Hammer		30	30		-		lid			Cutting Head			<u></u> ■ F		Te	sts		
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec. (in)	Sample Blows per 6"	Stratu Graph		p	opt	(Density/c constituents	onsi , par	l Identification & D stency, color, Grou ticle size, structure s, geologic interpre	up Na e, mo	ame, oisture,	Dilatancy			£		Remarks
	S-1	20	2	<u>×1 1/7</u> . ×		0.6	(8") - TC	PSOIL					-	-	-	-		
-	0.0'- 2.0' 0.6'-'		2 3 3		ML	0.0	Medium dry (ML		wn Cl	layey SILT, some med	dium	to fine Sand,	-	-	-	-	PID = 0	
_											_							
	S-2 2.0'- 4.0'	18	3 4 16		ML	3.0	Top (12	") - Light browr	1 SIL	T, little medium to fine	e San	nd, dry (ML)	-	-	-	-	Gravel is Auger gri	Basalt. nding from 3 to 4 feet BGS.
			50/4"	0	GM		Bottom medium	(12") - Gray to to fine Sand,	light dry ((brown Silty coarse to GM)	fine	GRAVEL, little						
-	S-3	4	50/5"		GM	4.4	∖trace m	edium to fine S	Sand,		RAVE	EL, little Silt,		-	-	-		
5	4.0'- 4.4'						Auger F	Refusal at 4.4 f Refusal at 4 fee ck Coring Log.										
-																		
_																		
-																		
-																		
10																		
_																		
-																		
-																		
-																		
15																		
-																		
-																		
-																		
			evel Data	pth in f	ant to:		Sam	ple Type		Notes:	and '	n Data -t						
Date	Time	Elapsed Time (hr)	Bot. of Casing	Botto	n _{Wato}	r o T	•	End Rod Vall Tube		PID = Photo Ioniz Groundwater not			of bo	orin	g			
						Jυ	Undis	turbed Samp										
						s	-	Spoon Sampl	е									
						G	Grab	Sample									Borina N	o.: B-SS-1
Field Te	st Legend		tancy:		None S							n-Plastic L - Lov					H - High	
NOTES:	1.) "baa" (.1		ghness: sample av		_ow M -			<u> </u>		ry Strength: N - N		e L - Low M - N						егу підп
								in limitations of										methods per ASTM D2488.

AN	N S	GI	EO						CORE BORING L	OG							E	DRING NO.: 3-SS-1 age 1 of 1
Projec Locati Client: Drilling	:t: ion: :	_ 	<u>High To</u> Moxee, Cypres	op Sola Washi s Creel illing S	ington k Rene		3			Project No.: Project Mgr Field Eng. S Date/Time S	:: Staff:		A ihir S		7, 20	20 at	F 11:1	
Driller Elevatio				Jecmin		eg al Dati	ım.		Boring Location:See Boring Location Pla	Date/Time F	inished						12:3	
Item			Cas		Core	e Barre	I 0	ore Bit	-	an		Co	oord.	: La	t: 46.	5313	75° L	.ong: -119.96777
Type Length			HS 5 1	ît		NQ 5 ft	inp	. Diamon 6 in	Horizontal Datum: NAD 1983 Rig Make & Model: Mobile B-57			_ Dr	illing	y Met	hod:	Wireli	ne	
Inside D Depth/ Elev.	Avg	Depth	4.2 Run/ (Box)	Rec (in. /	RQD (in /	.875 Rock	Core	1.875 Stratum	Visual Identification, Description ar (Rock type, colour, texture, weat field strength, discontinuity spa	thering,	Depth		Dis	scont	inuiti	es		Remarks
(ft)	(min /ft)	(ft)	No.	%)	%)			Graphic	optional additional geological obse	ervations)	(ft.)					otion Sys		Remarks
	,,	4.0				Hard.	Weath	ЯX	SEE TEST BORING LOG FOR OVERBURD BASALT, gray, fine grained, slightly weather			Туре	Dip	Rgh	Wea	Aper	Infill	
—5	2.50 3.00	6.0	R-1	24 100%	0 0%	R4	SL		BASALT, gray, fine grained, slightly weather close spaced discontinuities 4' - 6' Highly Fractured zone	,	5.50	J	90	P,R	DS	PO	ML	
_	2.50	6.0							BASALT, gray, fine grained, slightly weather close spaced discontinuities 6' - 6.9' Highly Fractured zone	ered, strong,								
	3.00							XX			7.30	J	15	P,Sm	DS	т	ML	
-	1.50		R-2	60 100%	9 15%	R4	SL		8.5' - 11' Highly Fractured zone		8.20	J	10	U,Sm	DS	PO	ML	
—10	1.50 1.25																	
-		11.0							11.0 End of Boring at 11 feet BGS. Borehole backfilled with soil cuttings.									
-																		
20 																		
		14	Vator	.evel D	ata			Note	e'									
Date	Tim	E	lapsed Time (hr)	Bot.	Depth of Bo ng of		to: Water		3.									
														Во	ring	No.:	3-S	S-1

AN	J S _G	EO						SOI	L BORING LO	C	ì							BORING NO.: B-REC-1A
Project		High To	p Solar							P	Project No.:			N	J/A			Page 1 of 1
Locatio			Washingt	ion							Project Mgr:				J/A			
Client:				enewable	s						Field Eng. Staff			_		r Sha		
Drilling			Iling Serv								Date/Time Star						,	0 at 1:10 pm
	Helper: Grade ft.		ecminek / ical Datum			Bori	nalo	cation: See Boring L	ocation Plan		Date/Time Finis	_		_	N:		er 7, 202	0 at 1:40 pm
ltem		Casing	Samp	oler Core	e Barrel		-	-				н	oriz	onta	al Da	atum	1: NAD 19	
Type Length		HSA 5 ft			-			& Model: Mobile B-	57 Cat-Head		Hammer Type Safety				i Flu nite	id	Drill Ro	d Size: Casing Advance
Inside Di		4.25	1.37	75	-	🗹 A	TV	Geoprobe	Winch		Doughnut		Po	lym	er			Hollow Stem Auger
Hammer Hammer		140 30	140		-	Tr		□ Air Track □	 Roller Bit Cutting Head 		Automatic		Wa No	ater ne				5
_	Sample							Visual - Manı	ual Identification & De	scri	intion				Tes	_		
Depth/ Elev.	No./	Rec.	Sample Blows	Siratum				(Density/cor	nsistency, color, Group	Nar	me,		~	SSS	~	Strength		Remarks
(ft)	Interval (ft)	(in)	per 6"	Graphic	Symbo				particle size, structure, ons, geologic interpreta				Dilatancy	Toughness	Plasticity	y Stre		
	S-1	20	3	'	<u> </u>	0.3	(4")	- Stained soils				-	ē	Ļ -	-	Duy	Official P	D = 0.0 ppm in stained
	0.0'- 2.0'	20	3		SM		$\sim - \sim$	") - Light brown Silty S	SAND, dry (SM)				-	-	-	-	area. PID = 1.0	
-	0.3'-'		3 6		,												1.0 - 1.0	ppin
	0.3 -		0															
-	S-2	10	6		SM		Me	dium dense, light bro	wn Silty medium to fine SA	AND,	, dry (SM)		-	-	-	-	PID = 0.0	ppm
	2.0'- 4.0'		6															
-			6 6		·													
_	S-3	18	5		SM		Loo	ose, light brown Silty r	medium to fine SAND, dry	(SM	1)		-	-	-	-	PID = 0.7	ppm
	4.0'- 6.0'		4 3															
			20															
_																		
	S-4	13	30 20		· SM		Ver	y dense, light brown	Silty medium to fine SANE	D, dry	y (SM)		-	-	-	-	PID = 0.0	ppm
-	6.0'- 7.5'		48		1													
			50/1"			7.5		oon Refusal at 7.5 fee	et BGS.			_						
-							End of Boring at 7.5 feet BGS. Borehole backfilled with soil cuttings.											
-																		
10																		
10																		
_																		
_																		
-																		
-																		
15																		
.0																		
-																		
-																		
-																		
		Water				_		Somple Ture	Notes							Ш		
		Water Le Elapsed	Dep	oth in feet				Sample Type	Notes: PID = Photo Ioniza	ation	Detector							
Date	Time	Time (hr)		Bottom of Hole	Water	r o T		pen End Rod hin-Wall Tube	Groundwater not e	enco	ountered at time	e of	bor	ing	(
		. /				ļυ		ndisturbed Sample										
						s	Sp	lit Spoon Sample										
					<u> </u>	G	Gı	rab Sample								1	Borina N	o∷ B-REC-1A
Field Te	st Legend		tancy:		one S-						-Plastic L - Lo					m I	H - High	
NOTES	1.) "bad" de		ghness: sample av					H - High ometer reading. 2.)	Dry Strength: N - No) "ppa" denotes soil sampl		L - Low M - I		_			<u> </u>		ery rign
																		nethods per ASTM D2488.

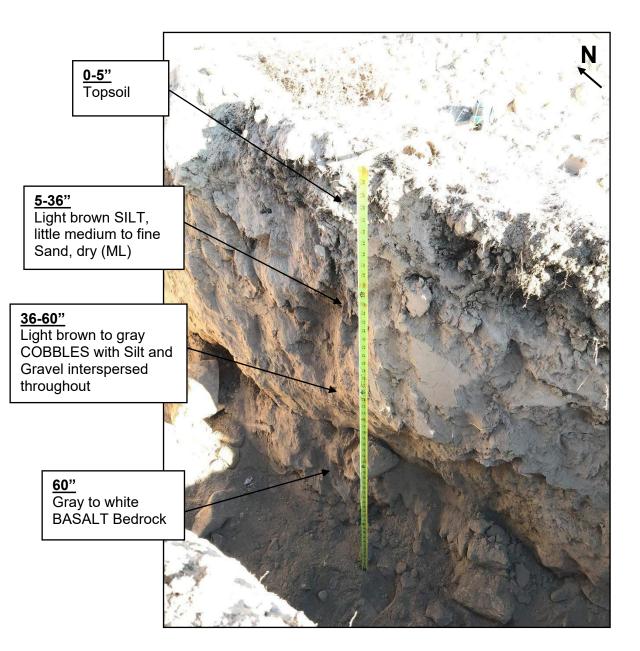
Attachment C

Test Pit Photo Logs



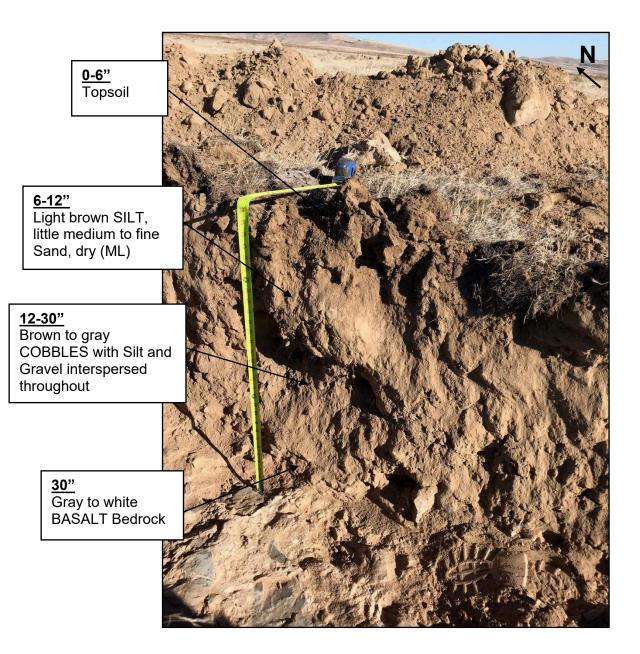


Project Name	High Top Solar	Test Pit ID	TP-01
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	60 inches (5.0 feet)	Time Opened	12:30 PM
Groundwater Depth	Not Encountered	Time Closed	1:05 PM



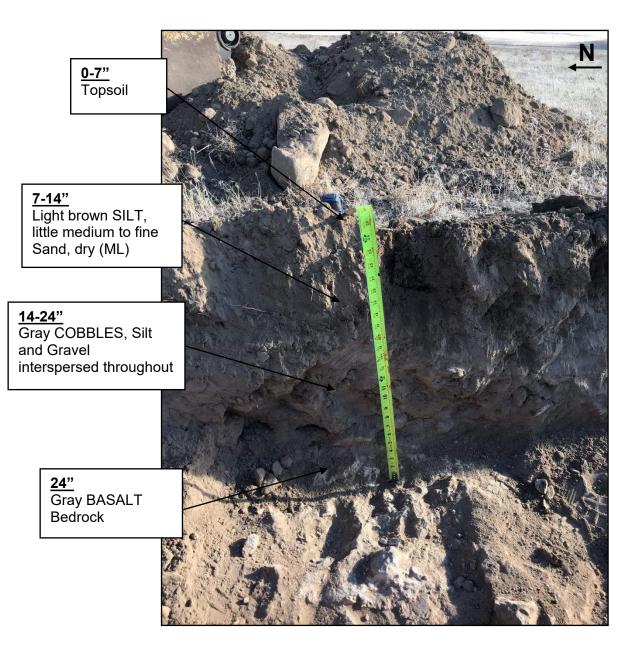


Project Name	High Top Solar	Test Pit ID	TP-02
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	30 inches (2.5 feet)	Time Opened	11:50 AM
Groundwater Depth	Not Encountered	Time Closed	12:20 PM



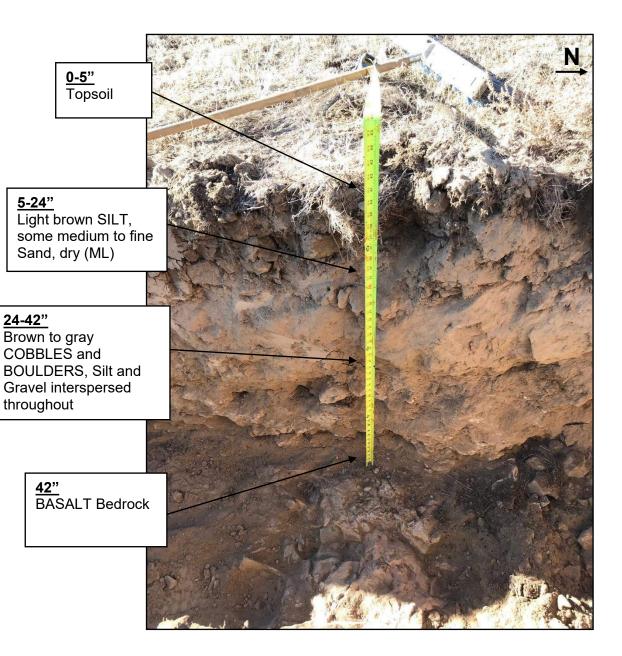


Project Name	High Top Solar	Test Pit ID	TP-04
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	24 inches (2.0 feet)	Time Opened	1:15 PM
Groundwater Depth	Not Encountered	Time Closed	1:35 PM



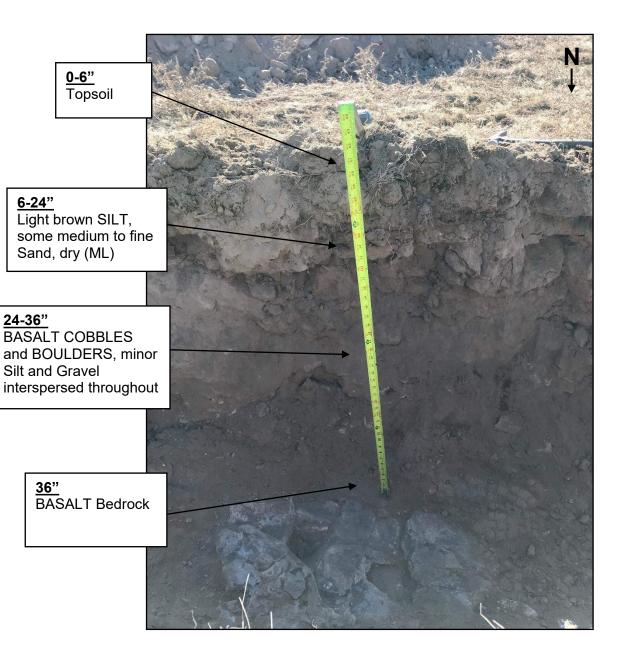


Project Name	High Top Solar	Test Pit ID	TP-05
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	42 inches (3.5 feet)	Time Opened	11:00 AM
Groundwater Depth	Not Encountered	Time Closed	11:35 AM



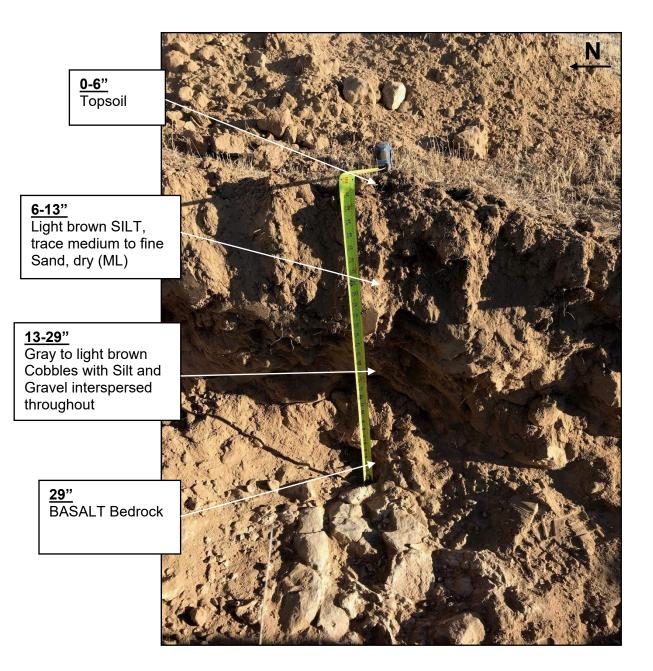


Project Name	High Top Solar	Test Pit ID	TP-06
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	36 inches (3.0 feet)	Time Opened	10:10 AM
Groundwater Depth	Not Encountered	Time Closed	11:00 AM



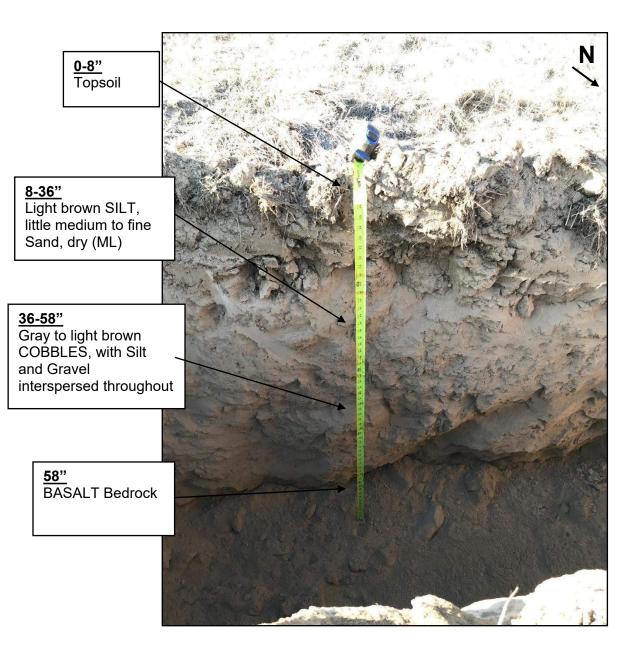


Project Name	High Top Solar	Test Pit ID	TP-07
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	29 inches (2.4 feet)	Time Opened	1:45 PM
Groundwater Depth	Not Encountered	Time Closed	2:10 PM



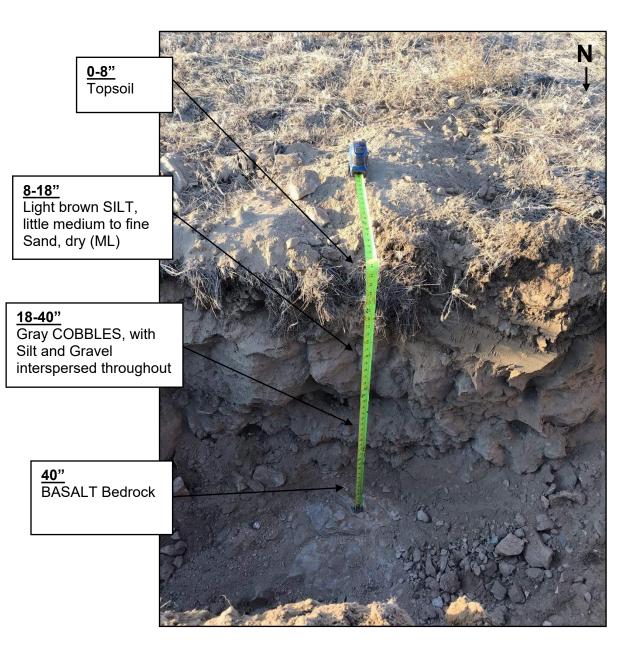


Project Name	High Top Solar	Test Pit ID	TP-10
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	58 inches (4.8 feet)	Time Opened	2:15 PM
Groundwater Depth	Not Encountered	Time Closed	2:35 PM



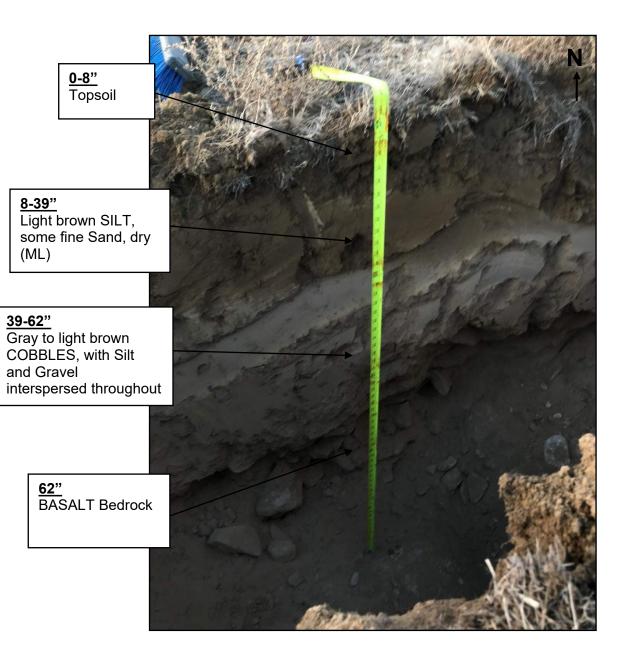


Project Name	High Top Solar	Test Pit ID	TP-13
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	40 inches (3.3 feet)	Time Opened	2:45 PM
Groundwater Depth	Not Encountered	Time Closed	3:10 PM



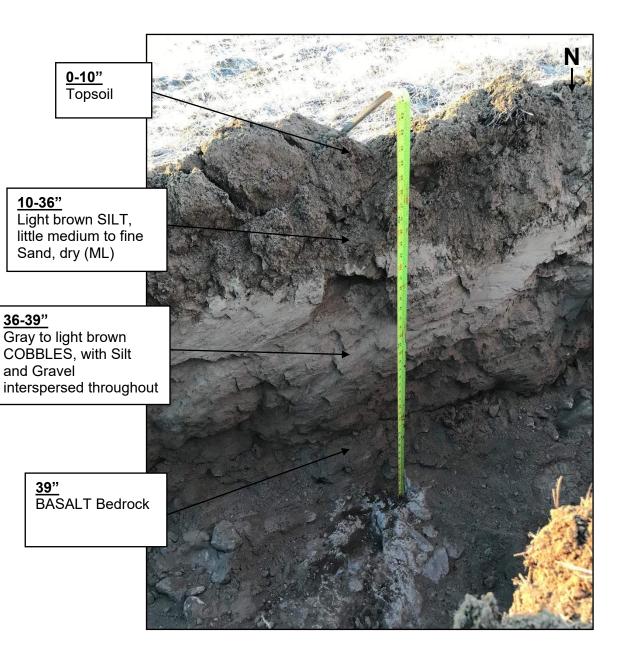


Project Name	High Top Solar	Test Pit ID	TP-18
Site Location	Moxee, Washington	Date	12/3/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 40°F
Final Test Pit Depth	62 inches (5.2 feet)	Time Opened	3:25 PM
Groundwater Depth	Not Encountered	Time Closed	3:50 PM



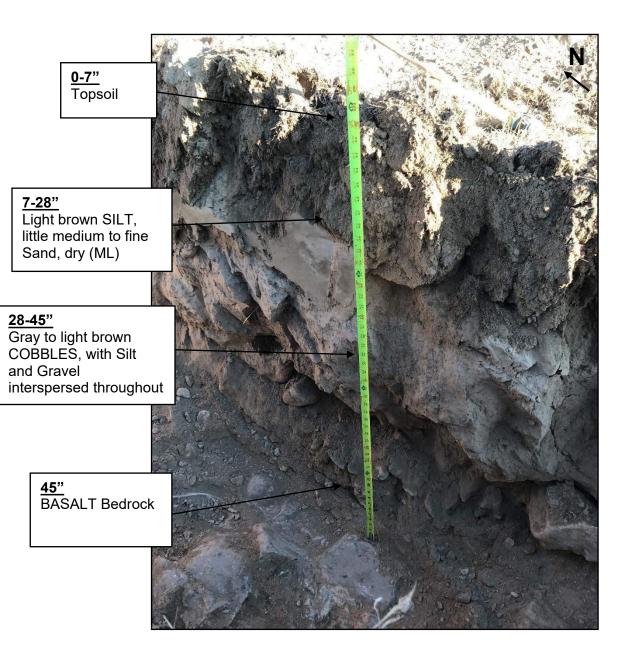


Project Name	High Top Solar	Test Pit ID	TP-20
Site Location	Moxee, Washington	Date	12/4/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 35°F
Final Test Pit Depth	39 inches (3.3 feet)	Time Opened	7:40 AM
Groundwater Depth	Not Encountered	Time Closed	8:10 AM



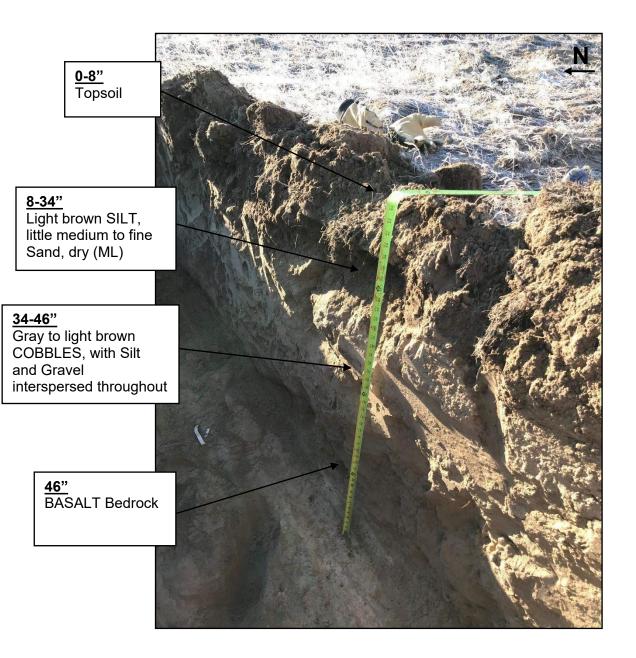


Project Name	High Top Solar	Test Pit ID	TP-21
Site Location	Moxee, Washington	Date	12/4/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 35°F
Final Test Pit Depth	45 inches (3.8 feet)	Time Opened	8:55 AM
Groundwater Depth	Not Encountered	Time Closed	9:30 AM





Project Name	High Top Solar	Test Pit ID	TP-24
Site Location	Moxee, Washington	Date	12/4/2020
Test Pit Contractor	Elite Drilling Services	ANS Geo Representative	Mihir Shah
Equipment Used	John Deere 26G	Weather/Temp	Sunny / 35°F
Final Test Pit Depth	46 inches (3.8 feet)	Time Opened	8:20 AM
Groundwater Depth	Not Encountered	Time Closed	8:50 AM



Attachment D

Electrical Resistivity Results



ANS	GEO
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Client:	Cypress Creek Renewables	Date:	October 28 - 29, 2020			
Project Name:	High Top Solar	Weather:	Sunny			
Project Location:	Moxee, Washington	Moxee, Washington Temperature: 60 - 65° F				
Equipment:	AGI MiniSting					
Test Method:	Wenner 4 Electrode Array					

A		Data						Array sp	acing (ft)					
Array Data -		1.0	1.5	2.0	3.0	4.5	7.0	10.0	15.0	22.5	35.0	50.0	75.0	
	N-S	Measured Resistance (Ω)	407.20	147.10	96.15	51.27	34.16	18.27	13.06	8.99	6.22	4.33	3.07	1.89
ERT-01	N-3	Apparent Resistivity (Ω-m)	779.98	422.45	368.20	294.59	294.44	244.97	250.06	258.23	268.07	290.23	293.95	271.24
	E-W	Measured Resistance (Ω)	321.70	173.70	109.20	54.48	32.56	17.88	13.11	8.77	6.31	3.82	2.84	1.50
	E-VV	Apparent Resistivity (Ω-m)	616.00	498.96	418.19	313.03	280.63	239.76	251.16	251.89	271.82	256.31	271.73	214.91
	N-S	Measured Resistance (Ω)	350.80	189.70	127.80	77.19	43.12	22.83	12.91	7.72	4.71	2.39	1.55	0.89
ERT-02	IN-3	Apparent Resistivity (Ω-m)	671.78	544.98	489.51	443.48	371.55	306.02	247.19	221.86	203.06	160.05	148.74	127.83
ERT-02	E-W	Measured Resistance (Ω)	322.30	227.90	153.70	81.92	43.62	1050.00	14.93	8.36	4.39	2.47	1.23	0.65
	E-VV	Apparent Resistivity (Ω-m)	98.24	654.71	588.87	470.61	375.82	320.04	285.96	240.21	189.10	165.69	117.53	93.12
	N-S	Measured Resistance (Ω)	2341.00	163.50	116.50	66.57	31.38	17.81	11.82	8.19	5.34	3.11	1.79	0.71
ERT-03	IN-3	Apparent Resistivity (Ω-m)	113.54	469.70	446.23	382.52	270.42	238.72	226.31	235.37	230.22	208.42	171.63	102.32
LKT-05	E-W	Measured Resistance (Ω)	235.90	124.40	78.02	48.99	30.26	19.08	12.89	7.52	5.40	3.32	1.91	0.77
	E-VV	Apparent Resistivity (Ω-m)	451.71	357.23	298.86	281.45	260.76	255.85	246.95	216.07	232.81	222.56	185.87	110.46
	N-S	Measured Resistance (Ω)	366.10	63.67	96.81	43.46	26.32	13.48	10.83	8.17	6.02	3.72	2.30	0.93
ERT-04	11-3	Apparent Resistivity (Ω-m)	701.04	182.91	370.94	249.69	226.83	180.72	207.39	234.73	259.29	249.11	220.10	141.12
EN1-04	E-W	Measured Resistance (Ω)	315.50	159.50	125.20	56.18	26.33	13.80	10.46	8.14	6.23	3.63	2.42	1.31
	L-VV	Apparent Resistivity (Ω-m)	604.11	458.42	479.45	322.78	226.92	185.04	200.25	233.75	268.56	243.38	231.80	188.12
		Site Average (Ω)	582.56	156.18	112.92	60.01	33.47	146.64	12.50	8.23	5.58	3.35	2.14	1.08
		Site Average (Ω-m)	465.20	452.41	484.00	360.75	297.64	252.59	244.96	234.86	238.11	220.47	201.93	158.52

ANS	GEO
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Client:	Cypress Creek Renewables	Date:	October 28 - 29, 2020			
Project Name:	High Top Solar	Weather:	Sunny			
Project Location:	Moxee, Washington	Moxee, Washington Temperature: 60 - 65° F				
Equipment:	AGI MiniSting					
Test Method:	Wenner 4 Electrode Array					

٨٣		Data						Array sp	acing (ft)					
Arr	ay	Data	1.0	1.5	2.0	3.0	4.5	7.0	10.0	15.0	22.5	35.0	50.0	75.0
	N-S	Measured Resistance (Ω)	284.40	162.10	105.20	77.41	19.98	12.30	8.02	5.84	4.73	3.61	2.72	1.93
ERT-05	N-3	Apparent Resistivity (Ω-m)	544.68	465.73	402.95	444.70	172.15	164.90	153.68	167.88	203.67	241.65	260.33	276.73
EKI-US	E-W	Measured Resistance (Ω)	251.70	186.50	111.80	40.11	19.40	12.13	8.88	6.05	4.34	3.70	2.83	1.77
	E-VV	Apparent Resistivity (Ω-m)	482.19	535.53	428.24	230.43	167.18	162.58	170.05	173.92	186.87	248.05	270.69	253.50
	N-S	Measured Resistance (Ω)	381.70	213.50	194.40	112.90	64.80	37.39	24.55	14.27	9.54	5.40	3.65	1.67
ERT-06	IN-3	Apparent Resistivity (Ω-m)	730.91	613.26	744.32	648.31	558.39	501.09	470.31	409.96	411.18	361.80	349.30	239.42
EKI-00	E-W	Measured Resistance (Ω)	355.70	239.20	184.50	124.60	68.09	1845.00	22.60	13.97	9.27	5.62	3.31	1.69
	E-VV	Apparent Resistivity (Ω-m)	108.42	687.32	706.53	715.98	586.74	562.36	432.82	401.42	399.59	376.43	316.69	243.26
	N-S	Measured Resistance (Ω)	1781.00	139.80	112.80	60.49	29.06	14.62	9.20	6.82	5.13	4.23	3.52	2.46
ERT-07	IN-5	Apparent Resistivity (Ω-m)	86.38	401.42	431.90	347.47	250.45	195.96	176.14	195.83	221.04	283.46	337.11	352.65
EKI-U/	E-W	Measured Resistance (Ω)	259.50	162.30	116.40	55.89	30.71	14.63	8.97	6.46	5.43	4.24	3.45	2.38
	E-VV	Apparent Resistivity (Ω-m)	497.13	466.04	445.92	321.26	264.69	196.17	171.75	185.44	234.03	283.92	330.71	341.99
	N-S	Measured Resistance (Ω)	297.10	148.30	84.23	36.22	21.13	13.76	10.74	9.76	7.41	5.11	2.59	1.94
ERT-08	IN-3	Apparent Resistivity (Ω-m)	569.37	426.11	322.48	208.09	182.06	184.46	205.77	280.45	319.13	342.90	248.17	279.29
EKI-U8	E-W	Measured Resistance (Ω)	304.10	133.00	91.48	35.48	19.73	14.56	12.08	9.61	6.89	5.13	3.26	2.06
	E-VV	Apparent Resistivity (Ω-m)	583.69	381.91	350.52	203.82	169.99	195.16	231.37	276.03	297.03	343.81	312.42	296.02
		Site Average (Ω)	489.40	173.09	125.10	67.89	34.11	245.55	13.13	9.10	6.59	4.63	3.17	1.99
		Site Average (Ω-m)	436.87	501.66	496.82	392.64	322.81	305.31	253.80	260.99	277.82	301.03	296.09	280.97

AN	S	GEO
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Client:	Cypress Creek Renewables	Date:	October 28 - 29, 2020
Project Name:	High Top Solar	Weather:	Sunny
Project Location:	Moxee, Washington	Temperature:	60 - 65° F
Equipment:		AGI MiniSti	ng
Test Method:		Wenner 4 Electro	de Array

A		Data						Array sp	acing (ft)					
Arı	ay	Data	1.0	1.5	2.0	3.0	4.5	7.0	10.0	15.0	22.5	35.0	50.0	75.0
	N-S	Measured Resistance (Ω)	350.60	220.10	173.70	72.35	34.71	18.51	13.70	10.06	7.52	5.33	3.44	1.91
ERT-09	N-3	Apparent Resistivity (Ω-m)	670.56	632.46	665.38	415.75	299.13	248.20	262.40	289.07	324.31	356.92	329.79	274.29
LNI-09	E-W	Measured Resistance (Ω)	459.50	192.00	140.50	67.55	40.25	15.07	12.05	10.43	8.03	5.57	3.68	1.79
	E-VV	Apparent Resistivity (Ω-m)	879.96	551.38	537.97	388.01	346.86	202.08	230.86	299.50	345.95	373.08	352.35	257.13
	N-S	Measured Resistance (Ω)	236.80	170.50	90.20	38.80	18.05	10.18	7.56	5.75	4.68	3.26	2.44	1.47
ERT-10	IN-3	Apparent Resistivity (Ω-m)	453.54	489.81	345.64	222.90	155.54	136.43	144.81	165.17	201.84	218.48	233.87	211.44
EKI-10	E-W	Measured Resistance (Ω)	283.10	161.30	94.19	43.93	19.31	464.20	7.58	5.49	4.39	3.51	2.57	1.41
	E-VV	Apparent Resistivity (Ω-m)	86.29	463.30	360.88	252.56	166.39	141.49	145.15	157.76	188.98	235.46	246.46	202.81
	N-S	Measured Resistance (Ω)	2042.00	153.20	104.40	50.82	27.14	11.87	6.20	3.47	1.99	1.28	1.05	0.83
ERT-11	IN-3	Apparent Resistivity (Ω-m)	99.09	440.13	399.90	338.02	233.90	159.11	118.69	99.73	85.80	85.86	100.46	119.39
	E-W	Measured Resistance (Ω)	346.00	185.60	116.00	56.14	33.00	12.81	5.79	3.23	1.98	1.31	1.00	0.82
	E-VV	Apparent Resistivity (Ω-m)	662.64	533.10	444.40	322.48	284.35	171.69	110.83	92.87	85.22	87.57	96.04	118.23
	N-S	Measured Resistance (Ω)	269.40	141.00	85.14	34.89	19.90	7.74	4.93	2.77	1.59	1.07	0.90	0.69
ERT-12	11-3	Apparent Resistivity (Ω-m)	516.03	405.08	326.14	200.47	171.45	103.75	94.43	79.52	67.88	71.60	86.01	98.91
ENI-12	E-W	Measured Resistance (Ω)	228.90	163.80	104.60	45.10	19.72	8.15	5.01	2.73	1.59	1.13	0.87	0.72
	L-vv	Apparent Resistivity (Ω-m)	438.30	470.31	400.51	259.11	169.99	109.24	96.01	78.30	68.58	75.68	83.42	103.21
		Site Average (Ω)	527.04	173.44	113.59	51.20	26.51	68.57	7.85	5.49	3.97	2.81	2.00	1.21
		Site Average (Ω-m)	447.98	479.01	435.75	327.00	274.23	179.94	154.99	152.63	163.33	179.60	190.37	183.50



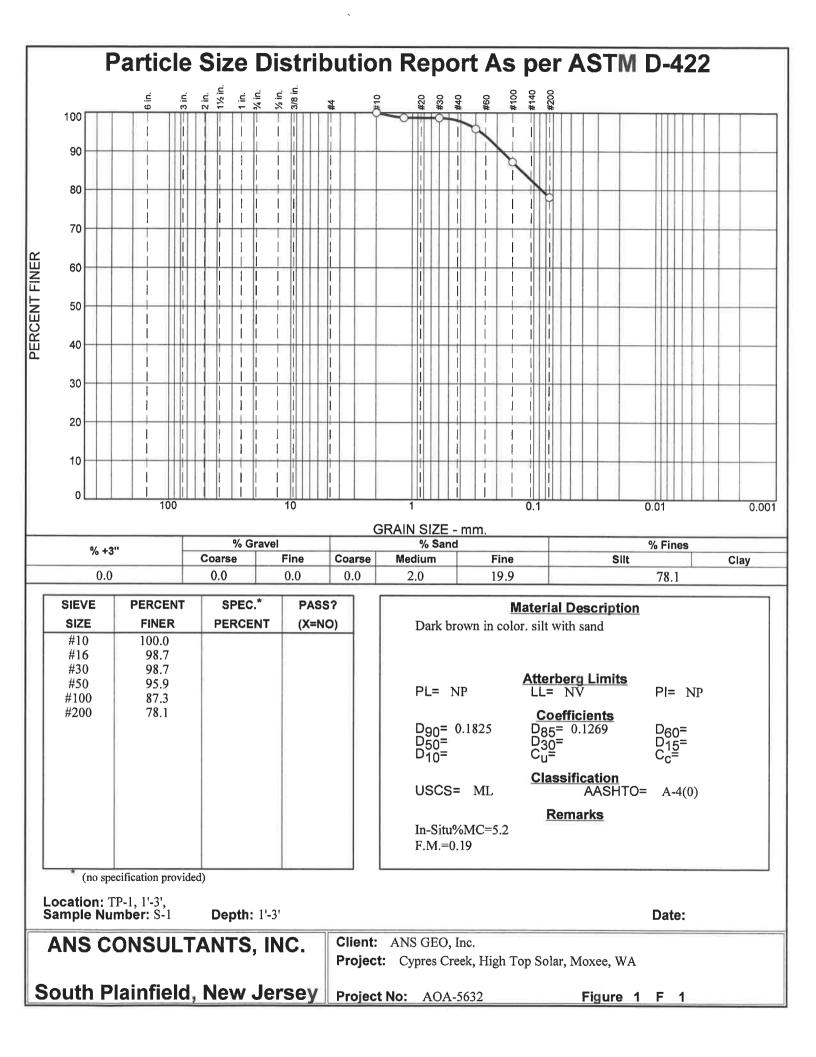
Client:	Cypress Creek Renewables	Date:	October 28 - 29, 2020
Project Name:	High Top Solar	Weather:	Sunny
Project Location:	Moxee, Washington	Temperature:	60 - 65° F
Equipment:		AGI MiniSting	
Test Method:	Wen	ner 4 Electrode Array	

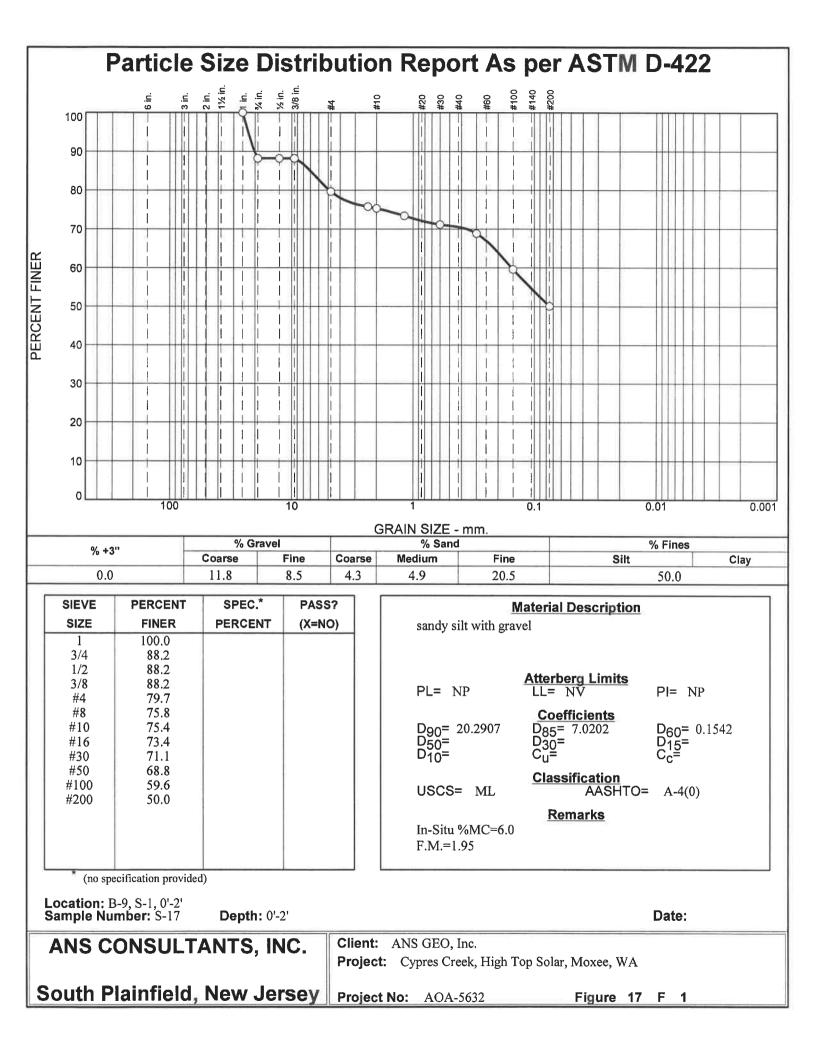
		Data							Array sp	acing (ft)						
A	rray	Data	1.0	1.5	2.0	3.0	4.5	7.0	10.0	15.0	22.5	35.0	50.0	75.0	100.0	150.0
	N-S	Measured Resistance (Ω)	283.60	179.40	111.00	54.14	28.62	13.54	9.76	7.49	6.18	4.95	4.13	2.56	1.82	1.01
ERT-SS-1	N-3	Apparent Resistivity (Ω-m)	0.54	515.42	424.89	311.20	246.64	181.45	186.96	215.28	266.09	331.62	395.33	367.28	349.30	289.50
EU1-22-1	E-W	Measured Resistance (Ω)	249.20	193.20	127.10	61.76	29.21	13.98	9.43	7.19	6.11	4.84	4.02	2.95	2.03	0.88
	E-VV	Apparent Resistivity (Ω-m)	0.48	554.74	487.07	354.79	251.73	187.39	180.56	206.47	263.19	324.00	385.27	423.98	388.32	253.01
		Site Average (Ω)	266.40	186.30	119.05	57.95	28.92	13.76	9.60	7.34	6.14	4.89	4.08	2.75	1.93	0.94
		Site Average (Ω-m)	0.51	535.08	455.98	332.99	249.19	184.42	183.76	210.88	264.64	327.81	390.30	395.63	368.81	271.26

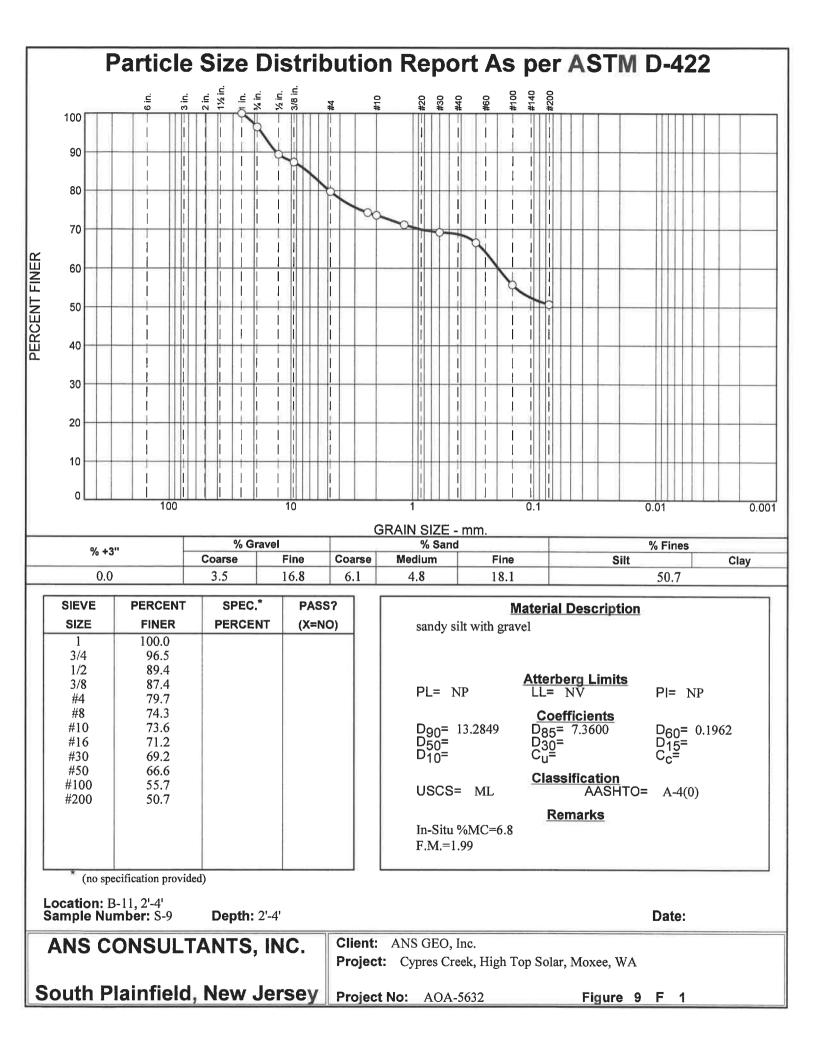
Attachment E

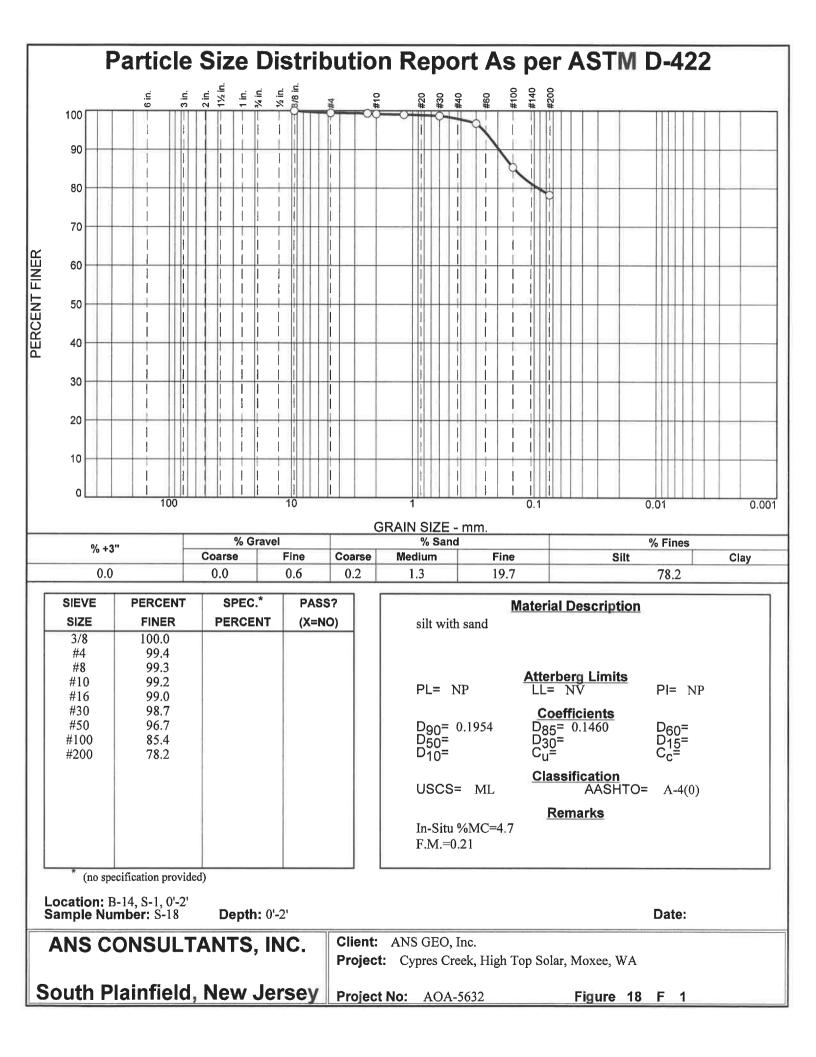
Geotechnical Laboratory Test Results

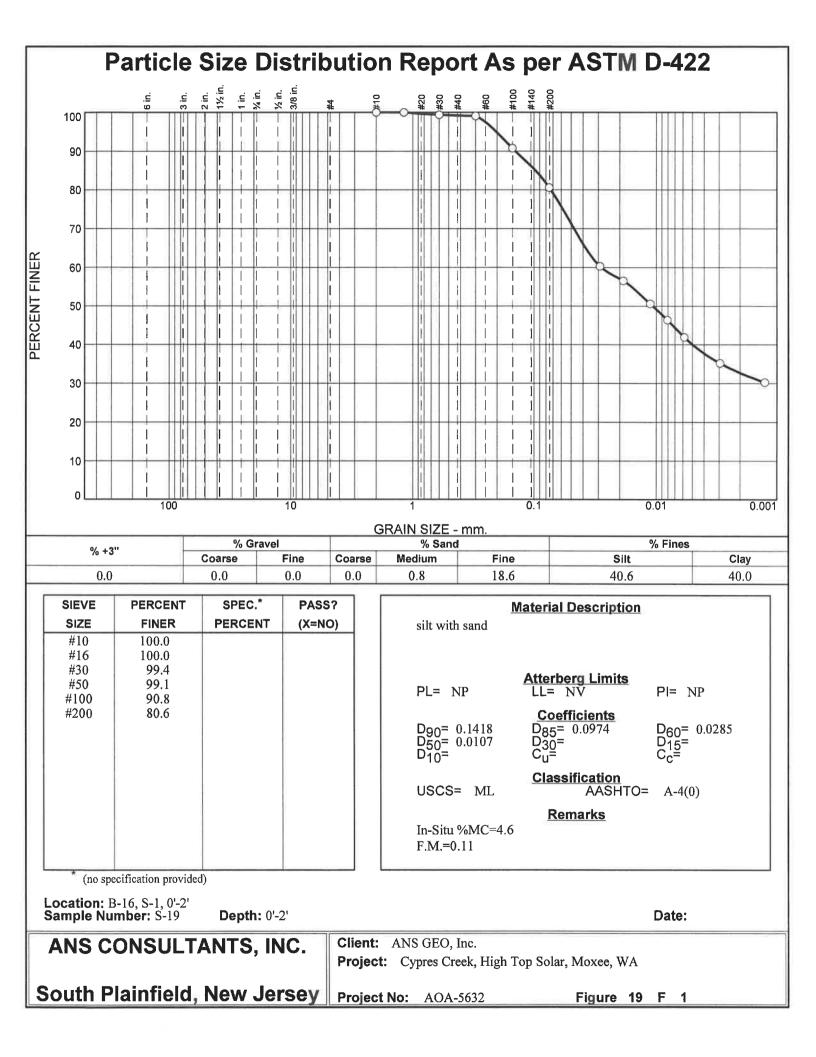


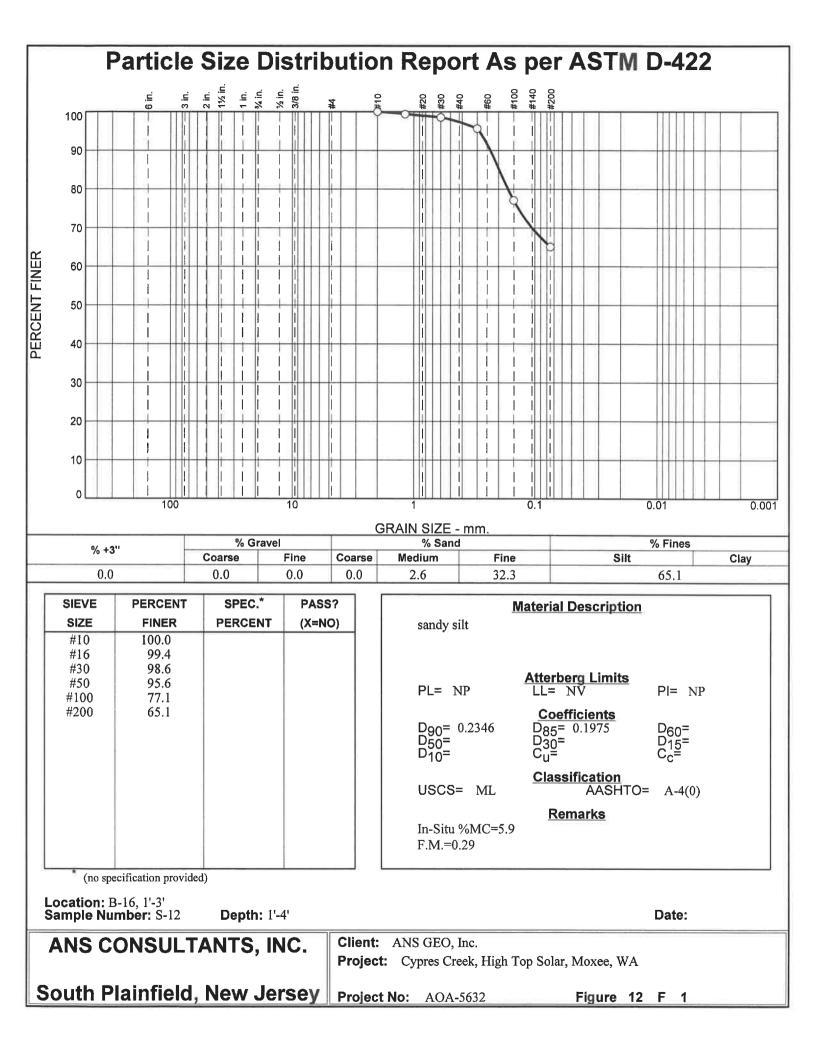


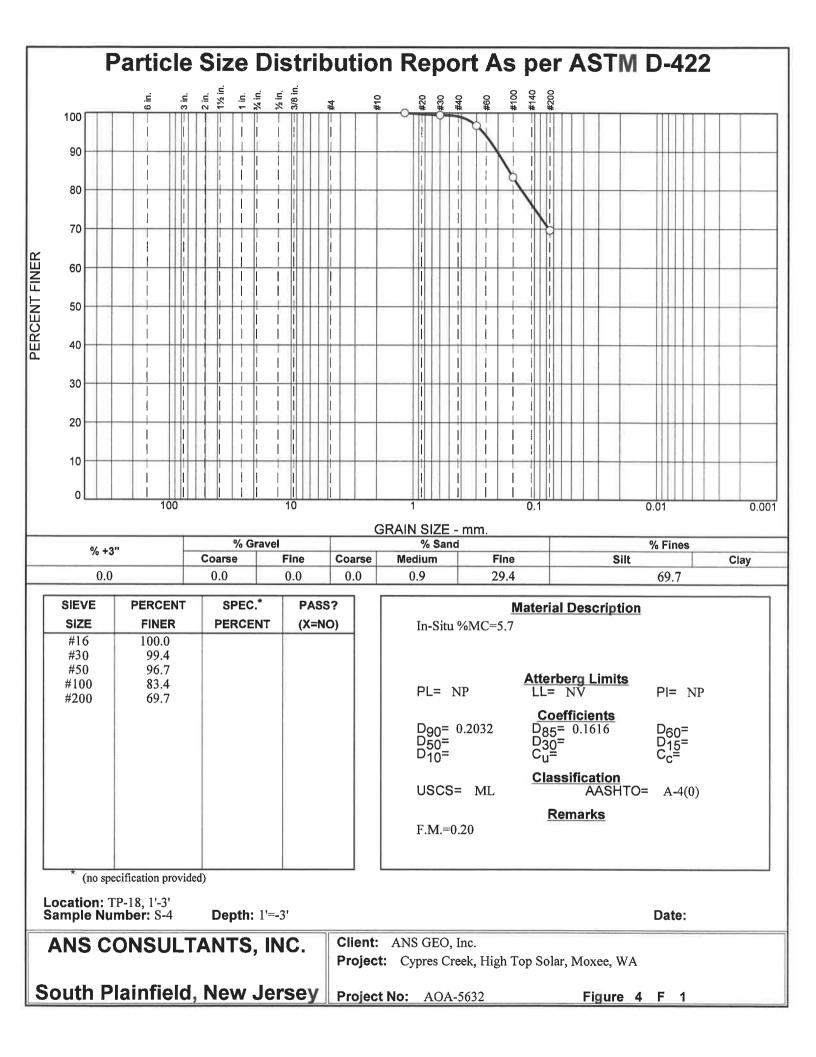


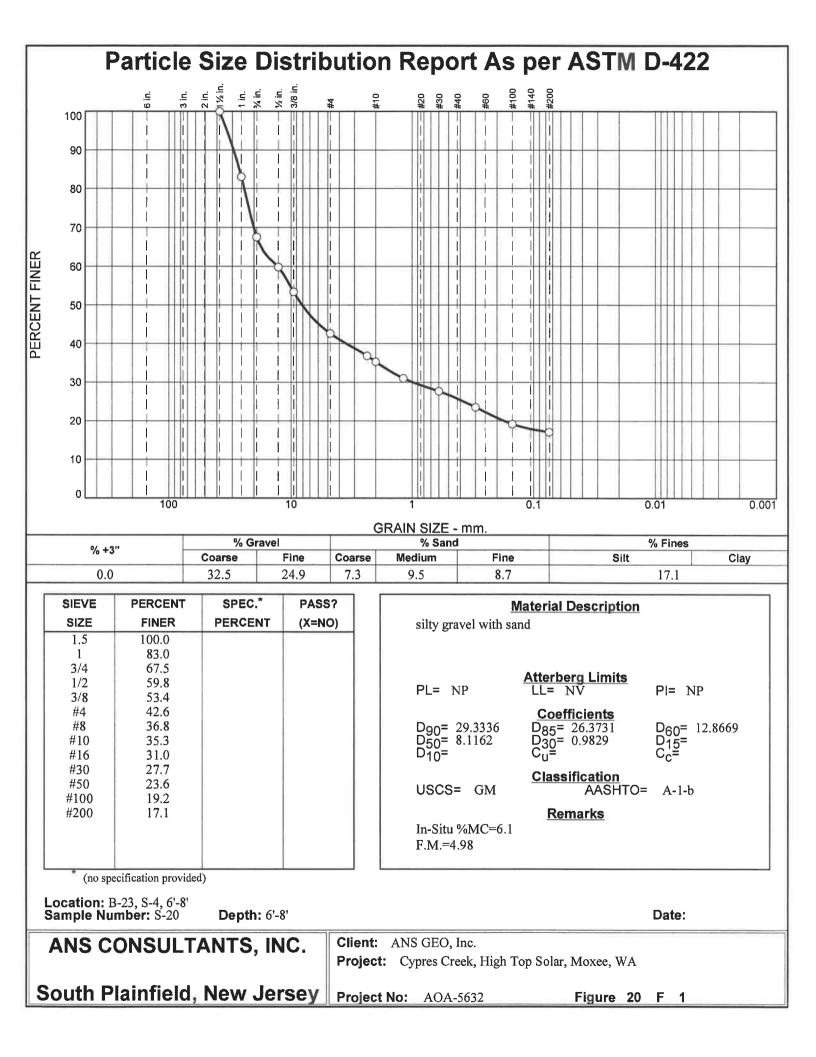


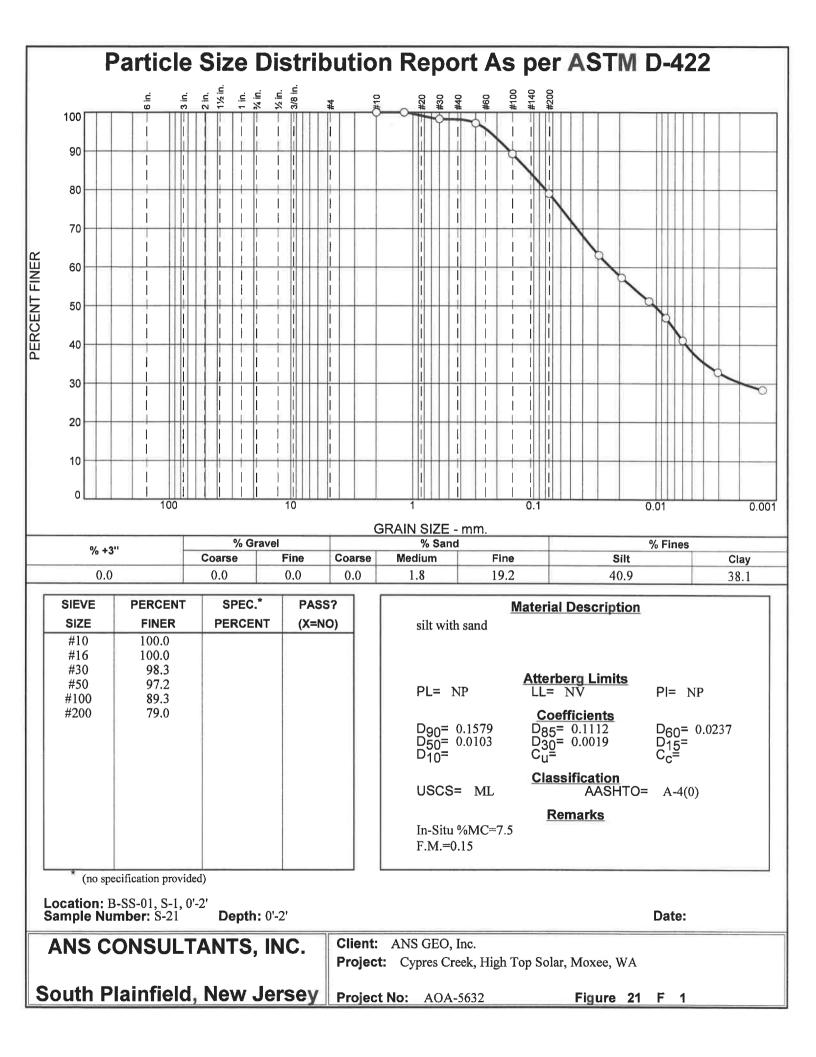














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CERTIFICATE OF TEST ANALYSIS

CLIENT : ANS GEO Inc. 4405 South Clinton Avenue South Plainfield, NJ 07080
 DATE :
 12/21/2020

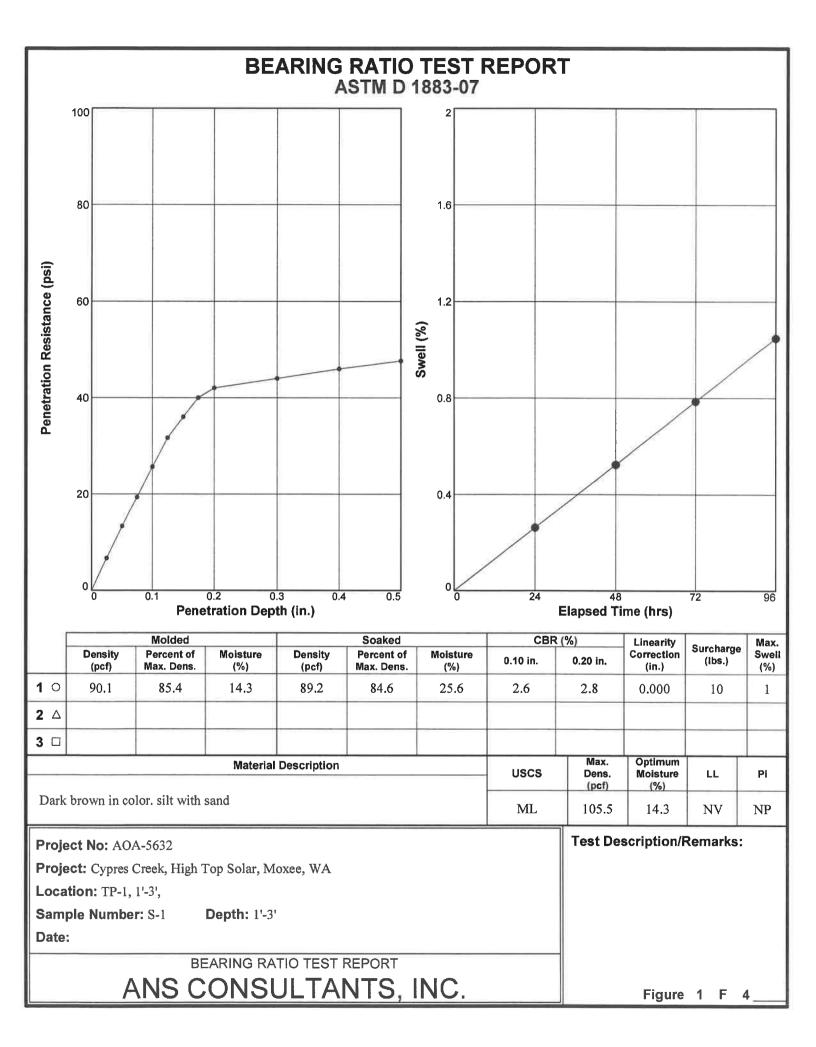
 FILE NO.:
 AOA 5632

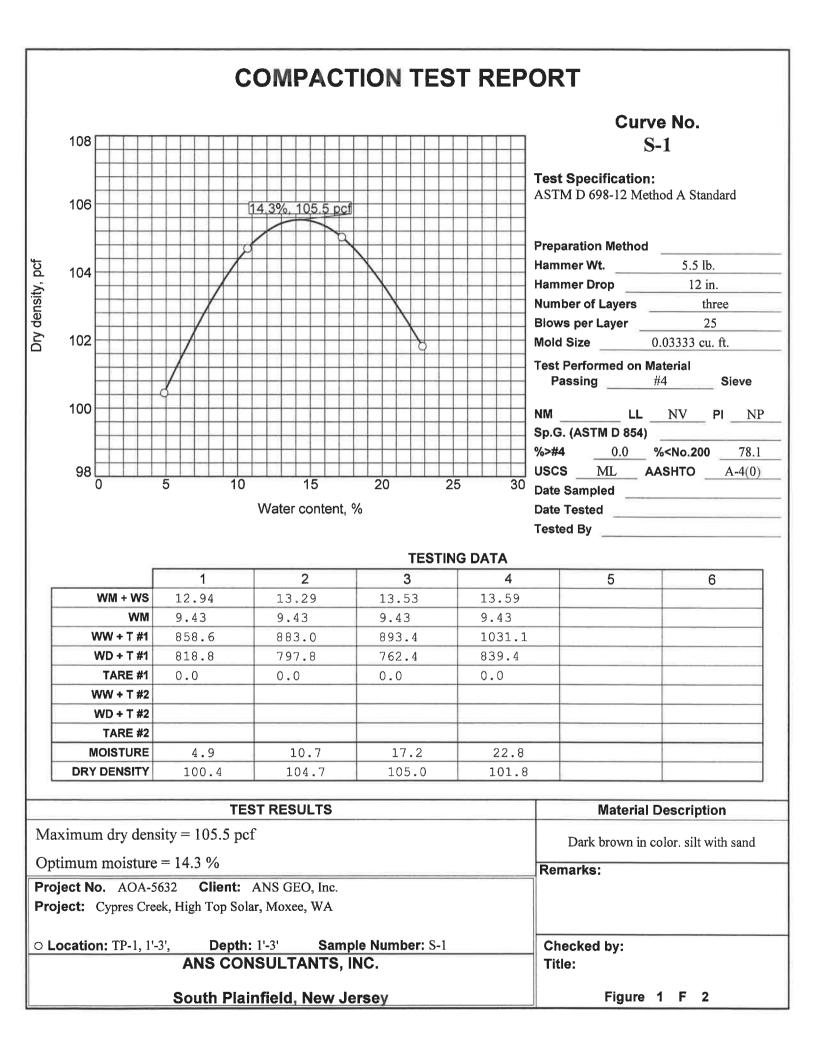
PROJECT : Cypress Creek High Top Solar Moxee, WA REPORT NO. : S-1,7,8,10-21

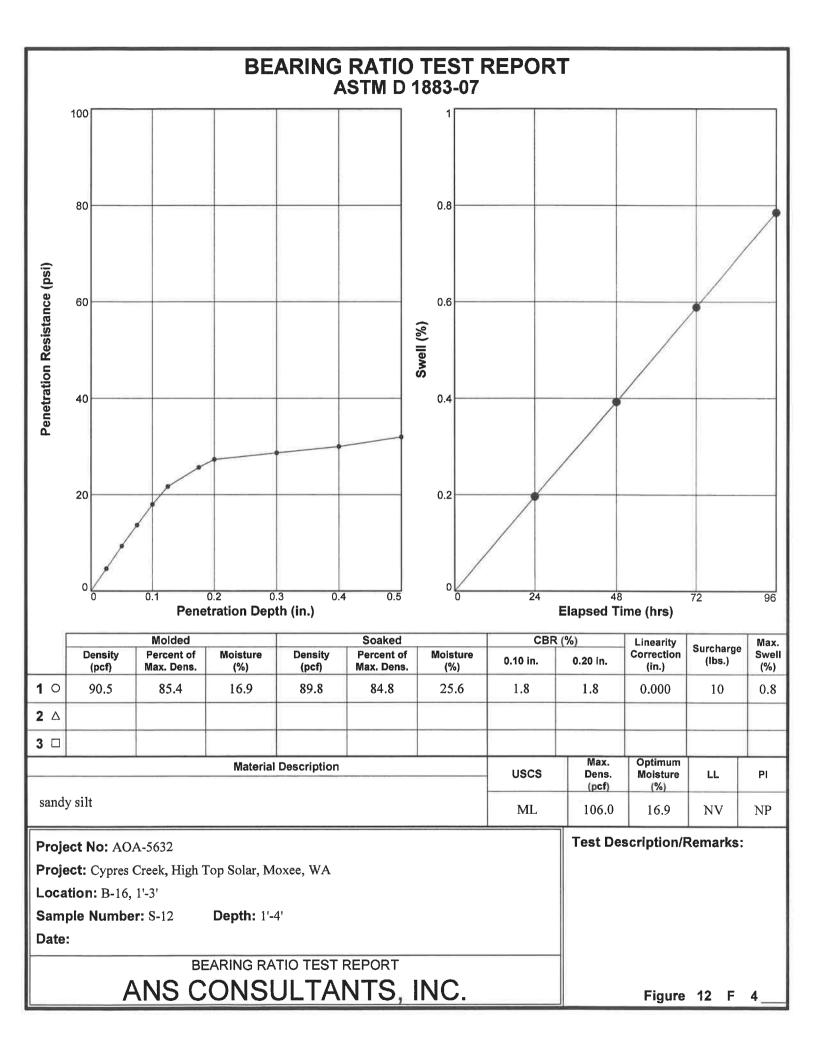
TEST PERFORMED : St

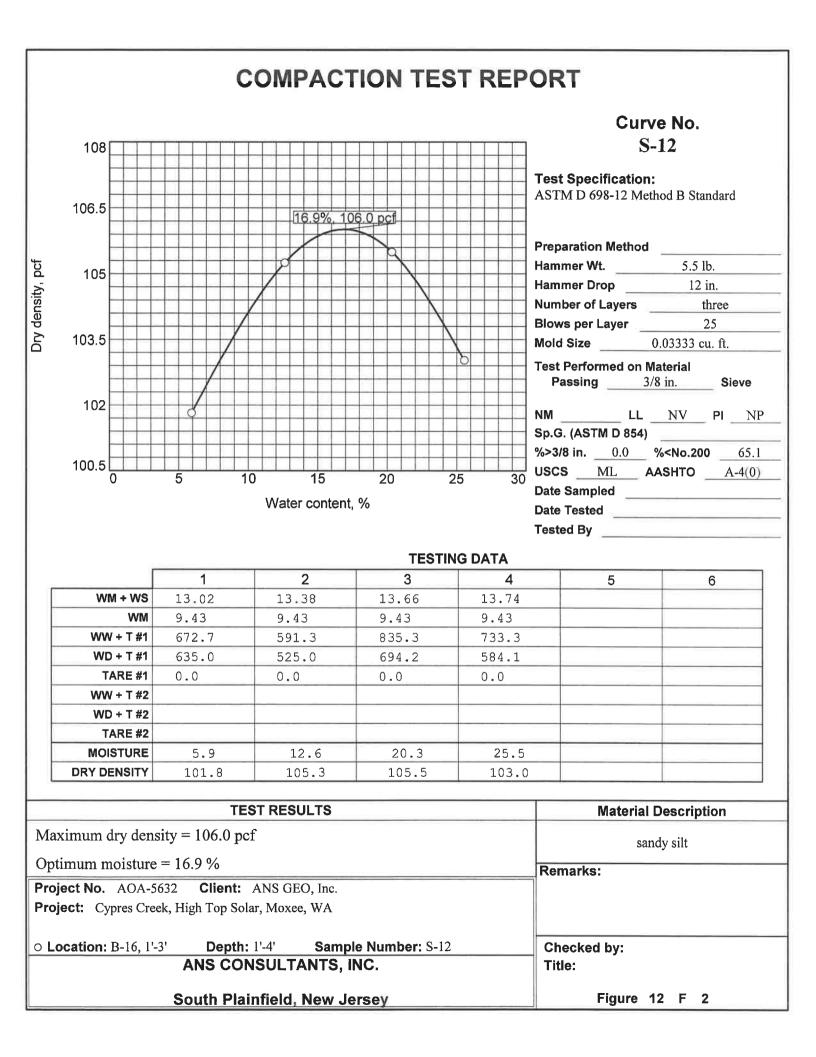
Standard Test Method for Moisture Content as per ASTM-D 2216

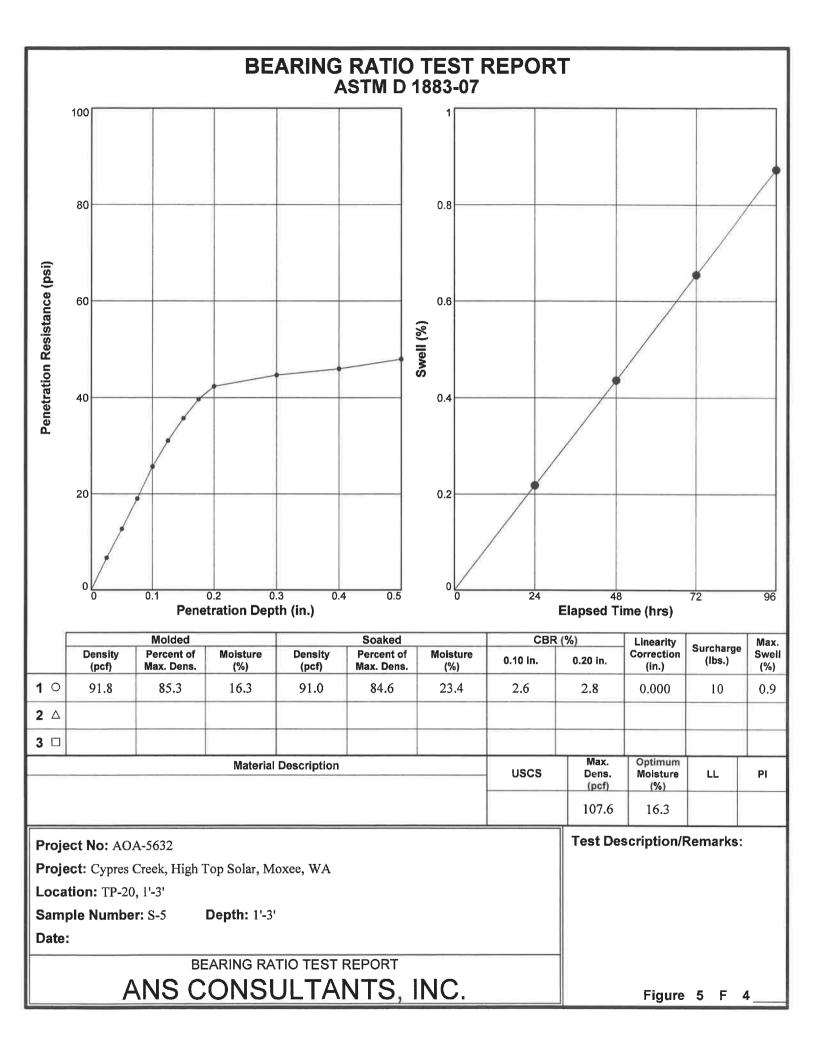
Report No.	Sample ID	Moisture Content %
S - 1	TP-1, Bulk, 1'-3'	5.2
S - 7	B-3, bulk, 1'-3'	4.9
S - 8	B-9, Bulk, 1'-3'	5.6
S - 10	B-14, Bulk, 1'-3'	4.7
S - 11	B-15, Bulk, 1'-3'	5.9
S -12	B-16, Bulk 1'-3'	5.3
S - 13	B-17, Bulk, 1'-3'	5.4
S -14	B-19, Bulk, 1'-3'	6.3
<u>S -15</u>	B-23, Bulk, 1'0-3'	4.7
<u>S - 16</u>	<u>B-25, Bulk, 1-'3'</u>	2.6
<u>S - 17</u>	<u>B-9, S-1,, 0'-2', bag</u>	6.0
<u>S -18</u>	B-14, S-1, 0'-2', bag	4.7
<u>S -19</u>	<u>B-16, S-1, 0'-2'</u>	4.6
S - 20	B-23, S-4, 6'-8'	14.7
S - 21	B-SS-01, S-1, 0'-2'	7.5













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THERMAL CONDUCTIVITY OF SOIL & SOFT ROCK BY THERMAL NEEDLE PROBE -IEEE 442

CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite#A South Plainfield, NJ 07080 DATE: 12/17/2020

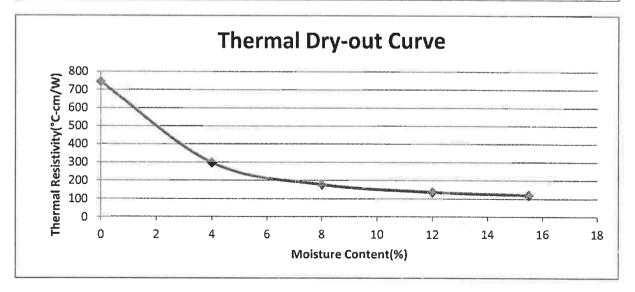
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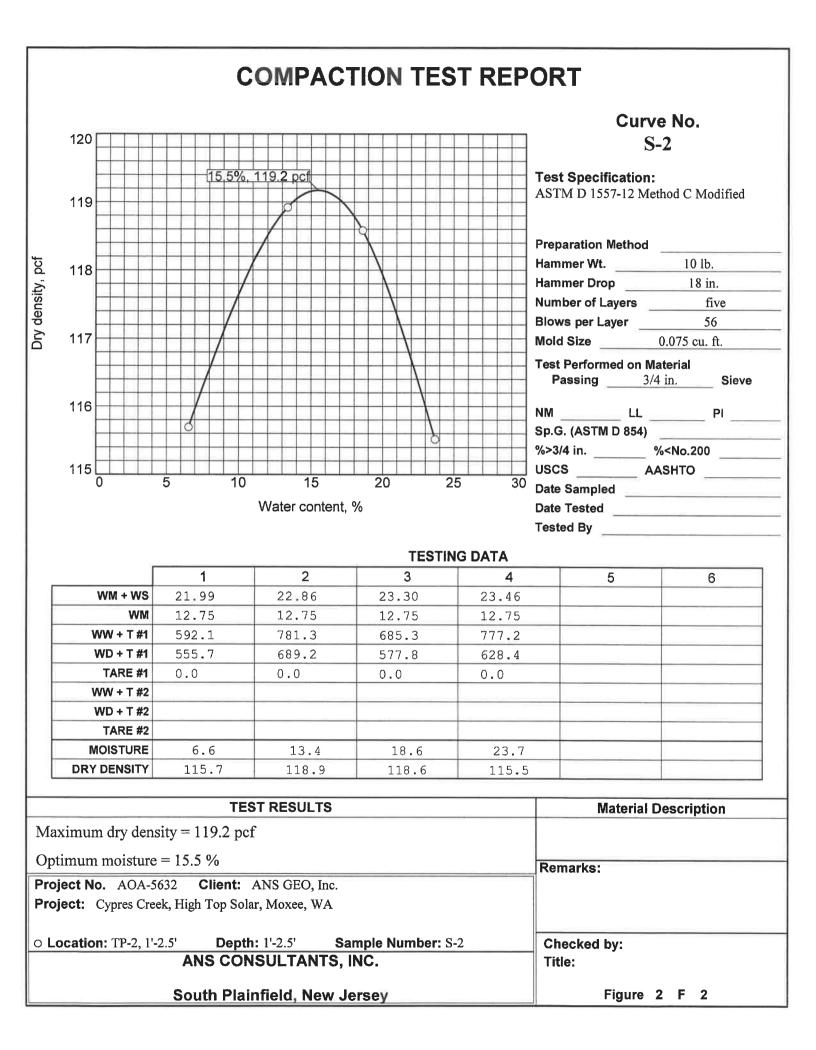
PROJECT: Cypress Creek-High Top Solar Moxee, WA **REPORT NO: S-2**

Test Data- Sample No. S-2 (TP-02, Bulk, 1'-2.5')

Standard Proctor Value: 109.2 Remolded Dry Density: 92.82 (85%) Optimum Moisture Content: 15.5% In-Situ Moisture Content: 3.75%

Moisture Contents (%)	Initial Soil Temperature (°C)	Thermal Resistivity (°C-cm/W)
0	25.6	746
4	25.2	298
8	25	177
12	24.8	136
15.5	24.7	120







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CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite#A South Plainfield, NJ 07080 DATE: 12/17/2020

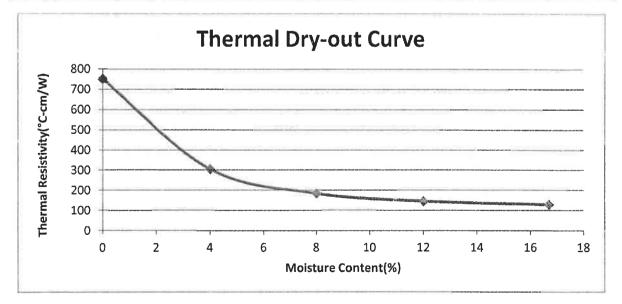
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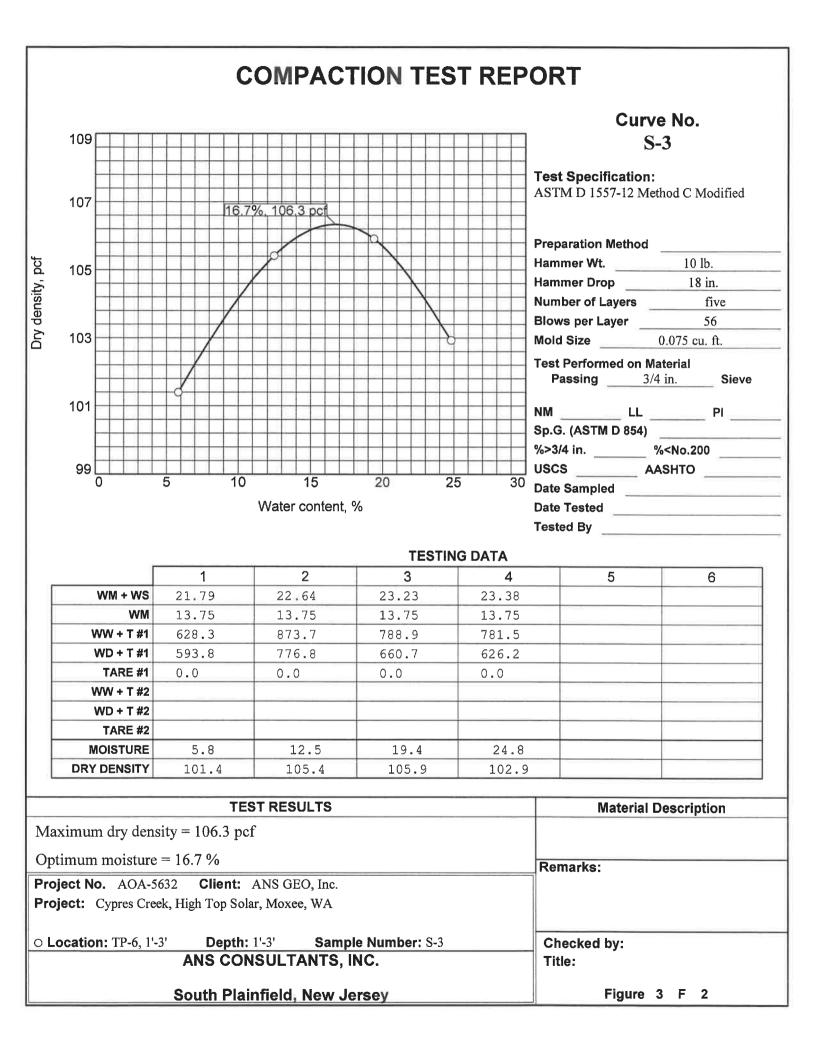
PROJECT: Cypress Creek-High Top Solar Moxee, WA **REPORT NO: S-3**

Test Data- Sample No. S-3 (TP-06, Bulk, 1'-3')

Standard Proctor Value: 106.3 Remolded Dry Density: 90.355(85%) Optimum Moisture Content: 16.7% In-Situ Moisture Content: 3.5%

Moisture Contents (%)	Initial Soil Temperature (°C)	Thermal Resistivity (°C-cm/W)
0	26.9	752
4	26.3	305
8	25.8	184
12	25.5	146
16.7	25.3	129







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THERMAL CONDUCTIVITY OF SOIL & SOFT ROCKBY THERMAL NEEDLE PROBE -IEEE 442

CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite#A South Plainfield, NJ 07080

DATE: 12/17/2020

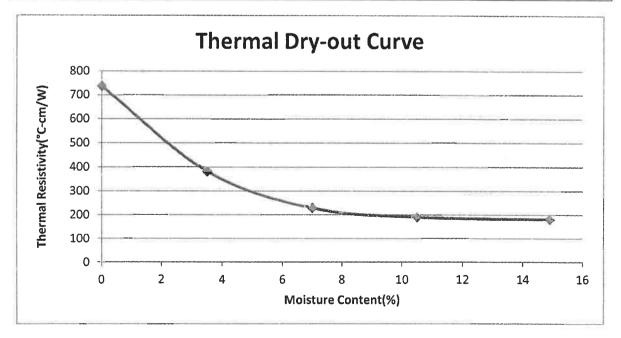
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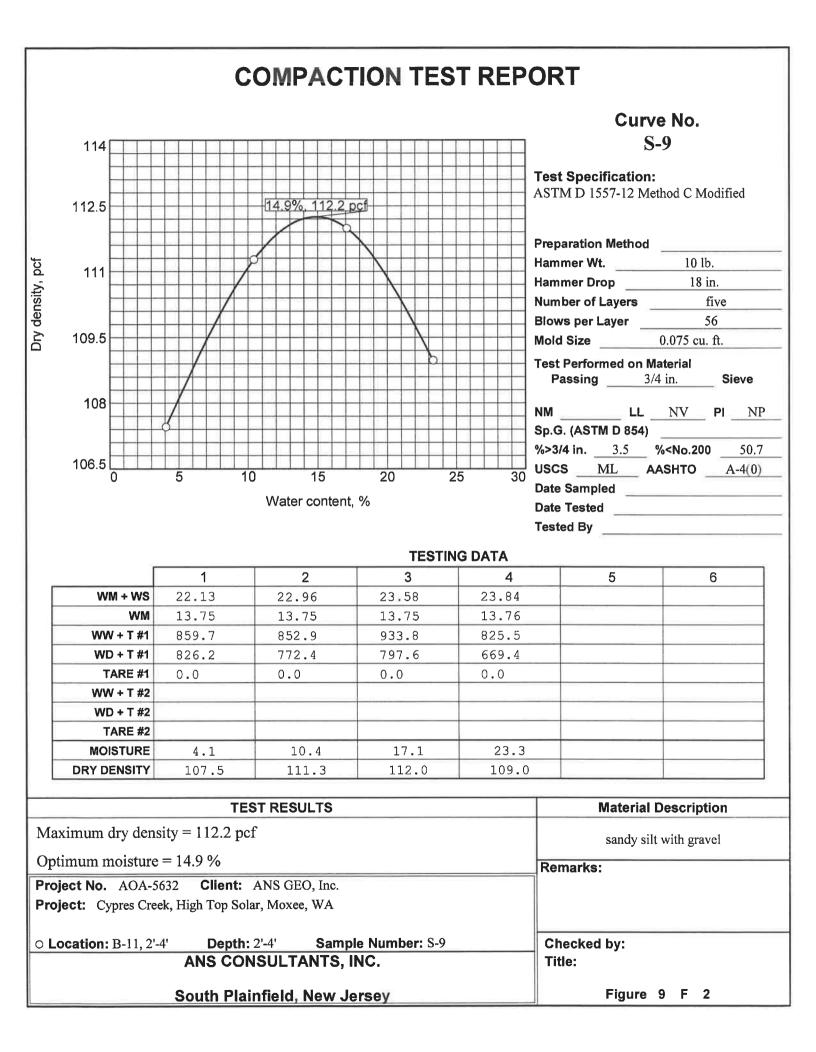
PROJECT: Cypress Creek-High Top Solar Moxee, WA **REPORT NO: S-9**

Test Data- Sample No. S-9 (B-11, Bulk, 2'-4')

Standard Proctor Value: 112.2 Remolded Dry Density: 95.37 (85%) Optimum Moisture Content: 14.9% In-Situ Moisture Content: 6.51%

Moisture Contents (%)	Initial Soil Temperature (°C)	Thermal Resistivity (°C-cm/W)
0	25	738
3.5	24.8	382
7	24.5	228
10.5	24.2	190
14.9	24.1	181







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CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite#A South Plainfield, NJ 07080

DATE: 12/17/2020

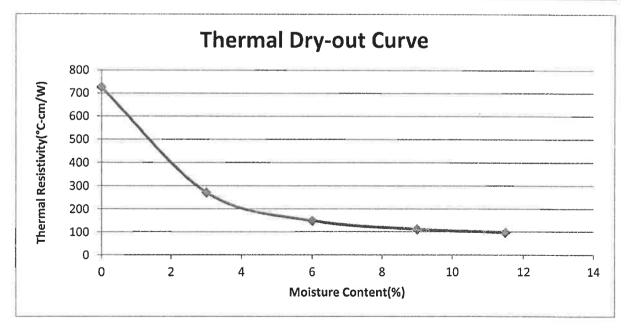
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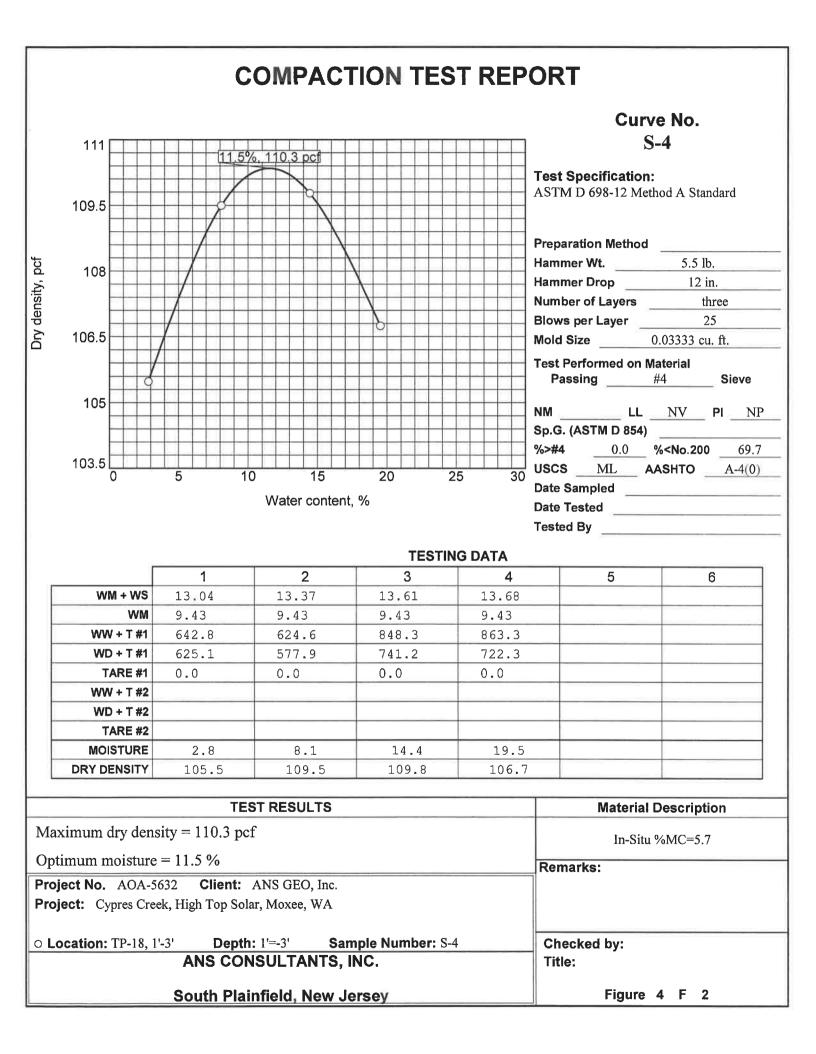
PROJECT: Cypress Creek-High Top Solar Moxee, WA **REPORT NO: S-4**

Test Data- Sample No. S-4 (TP-18, Bulk, 1'-2.5')

Standard Proctor Value: 110.3 Remolded Dry Density: 93.755 (85%) Optimum Moisture Content: 11.5% In-Situ Moisture Content: 4.29%

Moisture Contents (%)	Initial Soil Temperature (°C)	Thermal Resistivity (°C-cm/W)
0	25.7	726
3	25.2	271
6	24.8	148
9	24.6	110
11.5	24.3	96







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DATE: 12/17/2020

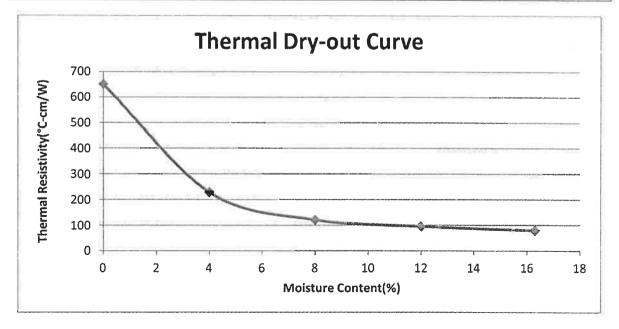
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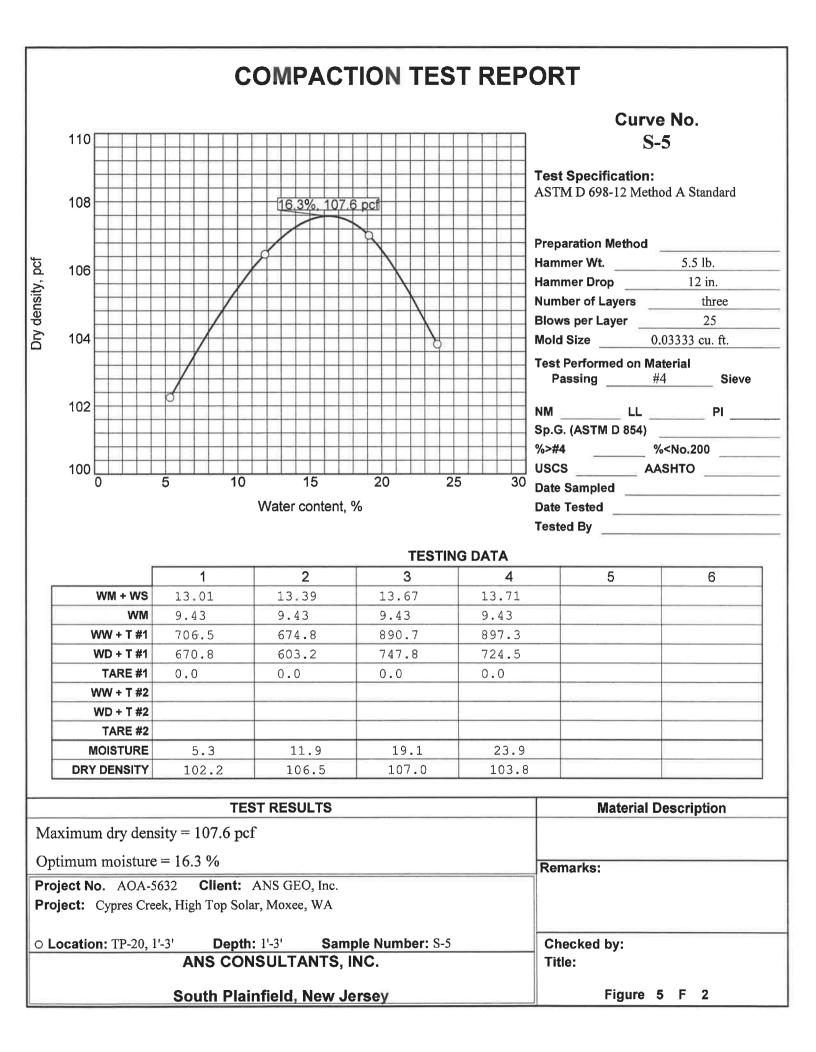
PROJECT: Cypress Creek-High Top Solar Moxee, WA **REPORT NO: S-5**

Test Data- Sample No. S-5 (TP-20, Bulk, 1'-3')

Standard Proctor Value: 107.6 Remolded Dry Density: 91.46 (85%) Optimum Moisture Content: 16.3% In-Situ Moisture Content: 5.55%

Moisture Contents (%)	Initial Soil Temperature (°C)	Thermal Resistivity (°C-cm/W)
0	25.6	652
4	25	229
8	24.7	122
12	24.5	95
16.3	24.3	79







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CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite#A South Plainfield, NJ 07080

DATE: 12/17/2020

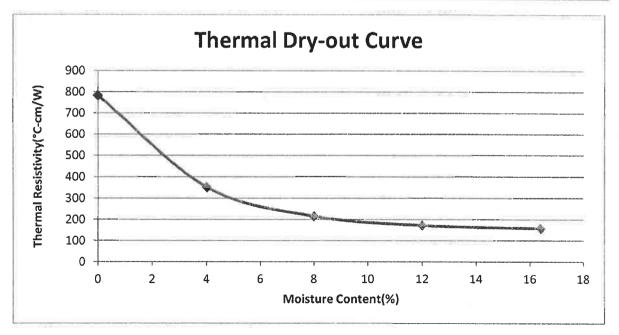
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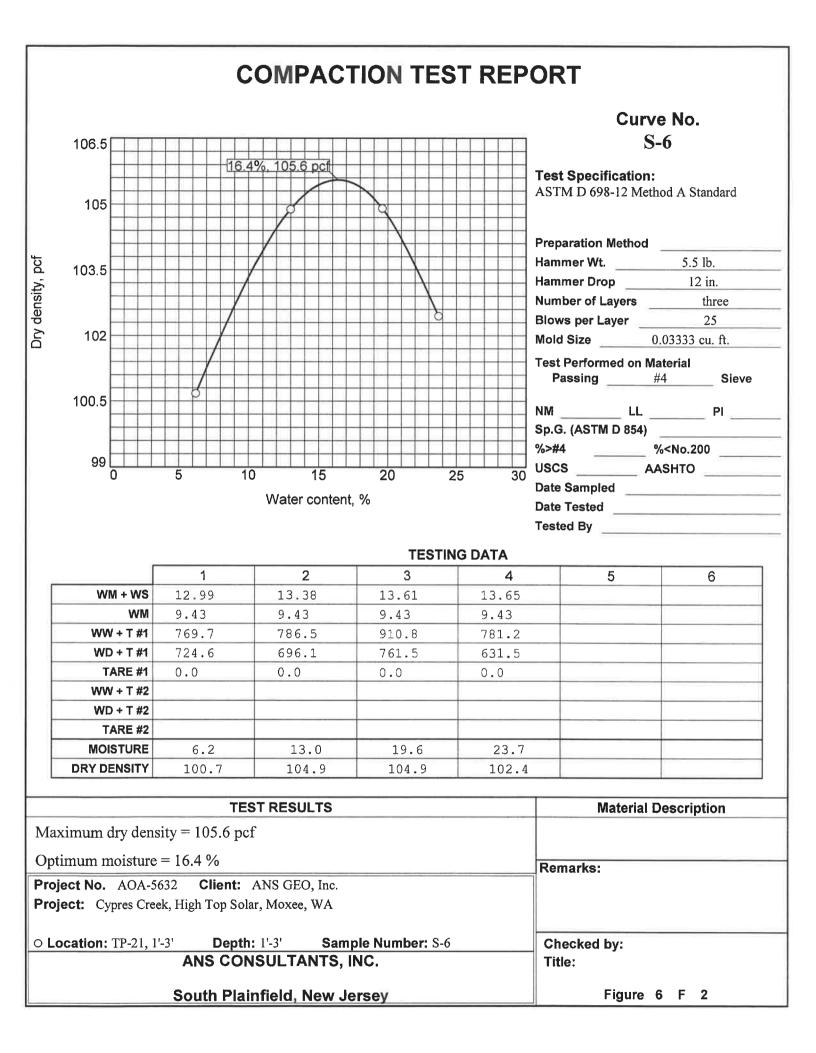
PROJECT: Cypress Creek-High Top Solar Moxee, WA **REPORT NO: S-6**

Test Data- Sample No. S-6 (TP-21, Bulk, 1'-3')

Standard Proctor Value: 105.6 Remolded Dry Density: 89.76 (85%) Optimum Moisture Content: 16.4% In-Situ Moisture Content: 6.81%

Moisture Contents (%)	Initial Soil Temperature (°C)	Thermal Resistivity (°C-cm/W)
0	25.2	784
4	25	352
8	24.7	215
12	24.5	172
16.4	24.3	158







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CERTIFICATE OF TEST - CORROSION ANALYSIS

CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite # A South Plainfield, NJ 07080 **DATE:** 12/17/2020

FILE NO: AOA-5632

PROJECT: Cypress Creek- High Top Solar Moxee, WA **REPORT: S-2 to S-4 & S-6 to S-8**

TEST PERFORMED: 1) Standard Test Method for Water Soluble Sulfate in Soil AS PER ASTM C-1580

- 2) Standard Test Method for measuring pH of Soil for use in Corrosion Testing AS PER ASTM G51-18
- 3) Standard Test Method for Measurement of Oxidation-Reduction Potential (ORP) of Soil AS PER ASTM G-200
- 4) Standard Method for Test for Determining Water Soluble Chloride Ion AS PER AASHTO T-291
- 5) Standard Test Method for Measuring Soil Resistivity using two-Electrode AS PER ASTM G187-18

Sample No.	Sample ID	Sulfate (mg/Kg)	рН	ORP (mV)	Chloride (mg/Kg)	Resistivity (Ohm-cm)
S-2	TP-2, Bulk, 1'-2.5'	38	6.33	+204	30	11,000
S-3	TP-6, Bulk, 1'-3'	72	6.75	+213	170	5,000
S-4	TP-18, Bulk, 1'-3'	28	6.77	+196	40	8,000
S-6	TP-21, Bulk, 1'-3'	24	6.82	+208	80	8,500
S-7	B-3, Bulk, 1'-3'	3	6.71	+217	35	3,000
S-8	B-9, Bulk, 1'-3'	3	6.91	+202	40	9,000



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CERTIFICATE OF TEST - CORROSION ANALYSIS

CLIENT: ANS Geo, Inc. 4405 South Clinton Avenue, Suite # A South Plainfield, NJ 07080 DATE: 12/17/2020

FILE NO: AOA-5632

PROJECT: Cypress Creek- High Top Solar Moxee, WA

REPORT NO: S-10, S-11, S-13 to S-16

TEST PERFORMED: 1) Standard Test Method for Water Soluble Sulfate in Soil

- AS PER ASTM C-1580
- 2) Standard Test Method for measuring pH of Soil for use in Corrosion Testing AS PER ASTM G51-18
- 3) Standard Test Method for Measurement of Oxidation-Reduction Potential (ORP) of Soil AS PER ASTM G-200
- 4) Standard Method for Test for Determining Water Soluble Chloride Ion AS PER AASHTO T-291
- 5) Standard Test Method for Measuring Soil Resistivity using two-Electrode AS PER ASTM G187-18

Sample No.	Sample ID	Sulfate (mg/Kg)	рН	ORP (mV)	Chloride (mg/Kg)	Resistivity (Ohm-cm)
S-10	B-14, Bulk, 1'-3'	7	6.65	+194	25	7,600
S-11	B-15, Bulk, 1'-3'	17	7.00	+200	30	8,500
S-13	B-17, Bulk, 1'-3'	11	6.85	+205	30	8,900
S-14	B-19, Bulk, 1'-3'	17	6.96	+153	35	11,000
S-15	B-23, Bulk, 1'-3'	27	7.01	+186	45	9,000
S-16	B-25, Bulk, 1'-3'	9	7.12	+193	40	9,500

Attachment F

Environmental Sampling Results



B-REC-1A & B-REC-1B

ENVIRONMENTAL RESULTS

CASCADE ANALYTIC A EUROFINS COMPANY 1-800-545-4206	(509) 452-7707 Clien Fax: (509) 452-7773 Account 1008 W. Abtanum Rd	
<i></i>	nalytical Ser	Report Date: 12/31/20
ANS Geo Inc 4475 S Clinto South Plainfi		
	mber: 20-C025911 fication: High Top Solar B [.]	Date Received: 12/ 7/20 -REC-1A Date Sampled: 12/ 7/20
Test Requested	Results Units RL	Method Date Analyzed Flags
Approved By Name: Function:	Andy Schut Sign Leb Manag <mark>er/Yakima</mark>	ature: AAA
makes no warranty of any kind. only to the items tested and t client as a result of use of t Eurofins-Cascade Analytical fo	es procedures established by EPA, ADAC, APHA, The client assumes all risk and liability fr he sample(s) as received by the laboratory. E he test results shall be limited to a sum equ r analysis. PLEASE REVIEW YOUR DATA IN A TIME BILITY. THOUGH WE DO KEEP ALL ANALYTICAL DATA	om the use of these results. Results relate urofins-Cascade Analytical liability to the al to the fees paid by the client to LY MANNER. DATA GAPS OR ERRORS AFTER ONE
	Page: 1 of 1	

CASCADE ANALY A EUROFINS COMP 1-800-545-420	A N Y	Road 801 Elient: ANS Geo Inc 3 Account: 21800 Rd. Sampler: PO Number:
	Analytical : nton Ave #225 nfield, NJ 07080	Services Report Report Date: 12/31/20
	Number: 20-C025912 Stification: High Top	Date Received: 12/ 7/20 Solar B-REC-1B Date Sampled: 12/ 7/20
Test Requested	Results Units	RL Method Date Analyzed Flags
	Andu Sabut	Atta
Approved By Name: Function:	Andy Schut Lab Manager/Yakima	Signature: ULL -
makes no warranty of any H only to the items tested a client as a result of use Eurofins-Cascade Analytica	ind. The client assumes all risk and and the sample(s) as received by the of the test results shall be limited al for analysis. PLEASE REVIEW YOUR D	, AOAC, APHA, ASTM, and AWWA. Eurofins-Cascade Analytical liability from the use of these results. Results relate laboratory. Eurofins-Cascade Analytical liability to the to a sum equal to the fees paid by the client to ATA IN A TIMELY MANNER. DATA GAPS OR ERRORS AFTER ONE ALYTICAL DATA FOR SEVERAL YEARS, SAMPLES ARE DISPOSED
	Page: 1 of	1



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

Laboratory Job ID: 580-99649-1 Client Project/Site: ANS Geo

For:

..... Links

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he

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Cascade Analytical Inc 1008 W. Ahtanum Rd. Union Gap, Washington 98903

Attn: Andy Schut

Authorized for release by: 12/31/2020 10:00:35 AM

Pauline Matlock, Project Manager (253)922-2310 pauline.matlock@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Job ID: 580-99649-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-99649-1

Comments

No additional comments.

Receipt

The samples were received on 12/10/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.0° C.

GC/MS VOA

Method 8260D: Naphthalene was detected in the method blank greater than the method detection limit but less than the reporting limit. The data have been qualified and reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-345537 recovered above the upper control limit for Bromomethane, Chloroethane, Dichlorodifluoromethane, 1,1-Dichloroethene, Chloromethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 580-345537/3).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-345397 and analytical batch 580-345537 recovered outside control limits for the following analytes: Dichlorodifluoromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: Surrogate recovery for the following samples were outside control limits: 20-C025910 (580-99649-1), 20-C025911 (580-99649-2) and 20-C025912 (580-99649-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270E: The method blank for preparation batch 580-345599 contained Naphthalene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 8270E: The method blank for preparation batch 580-345599 and analytical batch 580-345700 contained 2-Methylnaphthalene, Phenanthrene, Anthracene and 1-Methylnaphthalene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-345700 was outside criteria for the following analyte(s): N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270E: The following analytes have been identified, in the reference method and/or via historical data, to be poor and/or erratic performers: 2,4-Dinitrophenol. This analyte may have a %D >50%. (CCVIS 580-3457001/3)

Method 8270E: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 580-345599 and analytical batch 580-346684 recovered outside control limits for the following analyte(s): 3,3'-Dichlorobenzidine. 3,3'-Dichlorobenzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method 8270E: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-345599 and analytical batch 580-346684 recovered outside control limits for the following analytes: Bis(chloroisopropyl)ether. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-346684

Job ID: 580-99649-1

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Qualifiers

MQL NC

Not Calculated

GC/MS VOA	
Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
В	Compound was found in the blank and sample.
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
5 S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
GC/MS Semi	
Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are no applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
GC VOA	
Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
•	
GC Semi VO	
Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals	
Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
<u>¤</u>	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
	EPA recommended "Maximum Contaminant Level"
MCL	
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit

Client Sample ID: 20-C025911 Date Collected: 12/09/20 13:40

Date Received: 12/10/20 10:00

Lab Sample ID: 580-99649-2 Matrix: Solid

Percent Solids: 87.5

Structure and structure of

Method: 8260D - Volatile Or Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND *+	2.3	0.56	ug/Kg	 φ	12/10/20 11:00	12/12/20 00:12	
Chloromethane	ND	5.7	1.1	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
Vinyl chloride	ND	2.3	0.34	ug/Kg	Ŕ	12/10/20 11:00	12/12/20 00:12	
Bromomethane	ND	1.1	0.24	ug/Kg	÷	12/10/20 11:00	12/12/20 00:12	
Chloroethane	ND	11	0.85	ug/Kg	Þ	12/10/20 11:00	12/12/20 00:12	
Trichlorofluoromethane	ND	2.3	0.34	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,1-Dichloroethene	ND	5.7	1.2	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
Methylene Chloride	ND	45	11	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
trans-1,2-Dichloroethene	ND	2.3	0.45	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,1-Dichloroethane	ND	1.1		ug/Kg	₿	12/10/20 11:00	12/12/20 00:12	
2,2-Dichloropropane	ND	5.7		ug/Kg	Ų	12/10/20 11:00	12/12/20 00:12	
cis-1,2-Dichloroethene	ND	3.4		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
Bromochloromethane	ND	2.3		ug/Kg	¢		12/12/20 00:12	
Chloroform	ND	2.3		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,1,1-Trichloroethane	ND	2.3		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
Carbon tetrachloride	ND	2.3		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,1-Dichloropropene	ND	2.3		0 0	¢.	12/10/20 11:00	12/12/20 00:12	
Benzene	ND	2.3		ug/Kg	ġ.		12/12/20 00:12	
and the second	ND	1.1		ug/Kg	Ť ¢		12/12/20 00:12	
1,2-Dichloroethane	ND	2.3		ug/Kg	÷.	12/10/20 11:00	12/12/20 00:12	
Trichloroethene	ND	2.3		ug/Kg	¢		12/12/20 00:12	
1,2-Dichloropropane		1.1		ug/Kg			12/12/20 00:12	
Dibromomethane	ND	1.1		ug/Kg ug/Kg	¢		12/12/20 00:12	
Bromodichloromethane	ND				¢.		12/12/20 00:12	
cis-1,3-Dichloropropene	ND	1.1		ug/Kg			12/12/20 00:12	
Toluene	ND	11		ug/Kg	Å.		12/12/20 00:12	
trans-1,3-Dichloropropene	ND	11		ug/Kg	¢.		12/12/20 00:12	
1,1,2-Trichloroethane	ND	2.3		ug/Kg			12/12/20 00:12	
Tetrachloroethene	ND	2.3		ug/Kg	¢			
1,3-Dichloropropane	ND	2.3		ug/Kg	ф 	12/10/20 11:00	12/12/20 00:12	
Dibromochloromethane	ND	1.7		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,2-Dibromoethane	ND	1.1		ug/Kg	¢		12/12/20 00:12	
Chlorobenzene	ND	2.3	0.28	ug/Kg	ġ.	12/10/20 11:00	12/12/20 00:12	
Ethylbenzene	ND	2.3	0.46	ug/Kg	ġ.	12/10/20 11:00	12/12/20 00:12	
1,1,1,2-Tetrachloroethane	ND	3.4	0.67	ug/Kg	₽	12/10/20 11:00	12/12/20 00:12	
1,1,2,2-Tetrachloroethane	ND	4.5	1.0	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
m-Xylene & p-Xylene	ND	11		ug/Kg			12/12/20 00:12	
o-Xylene	ND	5.7		ug/Kg	¢		12/12/20 00:12	
Styrene	ND	3.4		ug/Kg	Ŕ		12/12/20 00:12	
Bromoform	ND	5.7	0.95	ug/Kg	₩.		12/12/20 00:12	
Isopropylbenzene	ND	2.3	0.52	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
Bromobenzene	ND	11	1.1	ug/Kg	Å	12/10/20 11:00	12/12/20 00:12	
N-Propylbenzene	ND	5.7	0.86	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,2,3-Trichloropropane	ND	5.7	1.1	ug/Kg	₽	12/10/20 11:00	12/12/20 00:12	
2-Chlorotoluene	ND	5.7	1.1	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,3,5-Trimethylbenzene	ND	5.7	0.92	ug/Kg	Å	12/10/20 11:00	12/12/20 00:12	
4-Chlorotoluene	ND	5.7	1.1	ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
t-Butylbenzene	ND	3.4		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
1,2,4-Trimethylbenzene	ND	5.7		ug/Kg	¢	12/10/20 11:00	12/12/20 00:12	
sec-Butylbenzene	ND	3.4		ug/Kg	∴	12/10/20 11:00	12/12/20 00:12	

Client Sample ID: 20-C025911 Date Collected: 12/09/20 13:40

Date Received: 12/10/20 10:00

Method: 8270E - Semivolat		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Analyte Acenaphthylene	ND		<u></u>		ug/Kg	<u>-</u>	12/22/20 18:55	12/23/20 16:52	5
	ND		840		ug/Kg	Ť. ¤	12/22/20 18:55	12/23/20 16:52	5
2,6-Dinitrotoluene	ND	F1 *-	1700		ug/Kg	¢.	12/22/20 18:55	12/23/20 16:52	5
3-Nitroaniline	ND	FI •	220		ug/Kg	÷.		12/23/20 16:52	
Acenaphthene	ND		11000		ug/Kg	Ϋ́		12/23/20 16:52	5
2,4-Dinitrophenol			11000	970	ug/Kg ug/Kg	÷		12/23/20 16:52	5
4-Nitrophenol	ND							12/23/20 16:52	5
Dibenzofur a n	ND	F 4	840	33	ug/Kg	ф ж		12/23/20 16:52	5
2,4-Dinitrotoluene	ND	FI	1100	240	ug/Kg	ф 			5
Diethyl phthalate	ND		2200	120	ug/Kg			12/23/20 16:52	
4-Chlorophenyl phenyl ether	ND	F1	1100		ug/Kg			12/23/20 16:52	
Fluorene	ND		140	28	ug/Kg	ţ.		12/23/20 16:52	5
4-Nitroaniline	ND	F2	840	280	ug/Kg	¢	12/22/20 18:55		5
4,6-Dinitro-2-methylphenol	ND		5600	560	ug/Kg		12/22/20 18:55		5
N-Nitrosodiphenylamine	ND	F1	340	45	ug/Kg	\$ 7		12/23/20 16:52	5
4-Bromophenyl phenyl ether	ND		1100		ug/Kg	\$		12/23/20 16:52	5
Hexachlorobenzene	ND		280	84	ug/Kg	¢		12/23/20 16:52	5
Pentachlorophenol	ND	F2	2200		ug/Kg	¢		12/23/20 16:52	5
Phenanthrene	ND		340	33	ug/Kg	¢	12/22/20 18:55		5
Anthracene	ND		340	90	ug/Kg	₽	12/22/20 18:55	12/23/20 16:52	5
Di-n-butyl phthalate	ND		2800	150	ug/Kg	₽	12/22/20 18:55	12/23/20 16:52	5
Fluoranthene	ND		220	67	ug/Kg	₽	12/22/20 18:55	12/23/20 16:52	5
Pyrene	1500		340	73	ug/Kg	₿. Ø	12/22/20 18:55	12/23/20 16:52	5
Butyl benzyl phthalate	ND		1100	290	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
3,3'-Dichlorobenzidine	ND	F1	2200	470	ug/Kg	Ŕ	12/22/20 18:55	12/23/20 16:52	5
Benzo[a]anthracene	ND		220	62	ug/Kg	\$	12/22/20 18:55	12/23/20 16:52	5
Chrysene	ND		340	73	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Bis(2-ethylhexyl) phthalate	18000		3400	400	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Di-n-octyl phthalate	ND	F1	840	67	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Benzo[a] pyrene	ND		340	73	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Indeno[1,2,3-cd]pyrene	ND		220	67	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Dibenz(a,h)anthracene	ND	F1	280	67	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Benzo[g,h,i]perylene	ND	F1	340	100	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Carbazole	ND		840	41	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
1-Methylnaphthalene	ND		170	28	ug/Kg	₽	12/22/20 18:55	12/23/20 16:52	5
Benzo[b]fluoranthene	ND		220	56	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
Benzo[k]fluoranthene	ND		340	79	ug/Kg	¢	12/22/20 18:55	12/23/20 16:52	5
bis(chloroisopropyl) ether	ND		1100	34	ug/Kg	☆	12/22/20 18:55	12/23/20 16:52	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	85		47 - 119				12/22/20 18:55	12/23/20 16:52	5
Phenol-d5 (Surr)	80		59 - 120				12/22/20 18:55	12/23/20 16:52	5
Nitrobenzene-d5 (Surr)	107		54 - 120				12/22/20 18:55	12/23/20 16:52	5
2-Fluorobiphenyl	101		57 - 120				12/22/20 18:55	12/23/20 16:52	5
2,4,6-Tribromophenol (Surr)	72		52 - 115				12/22/20 18:55	12/23/20 16:52	5
Terphenyl-d14 (Surr)	92		73 - 125				12/22/20 18:55	12/23/20 16:52	5
 Method: NWTPH-Gx - Nort	hwest - Volatile	e Petroleu	m Products (GC)					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	100	······································	22	10	mg/Kg	¢	12/16/20 15:23	12/16/20 18:36	1

Percent Solids: 87.5

Matrix: Solid

Lab Sample ID: 580-99649-2

Eurofins TestAmerica, Seattle

Client Sample ID: 20-C025912 Date Collected: 12/09/20 14:00 Date Received: 12/10/20 10:00

Job ID: 580-99649-1

Lab Sample ID: 580-99649-3 Matrix: Solid

Percent Solids: 94.0

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Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND *+	2.2	0.53	ug/Kg	Ŕ	12/10/20 11:00	12/12/20 00:38	
Chloromethane	ND	5.5	1.0	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Vinyl chloride	ND	2.2	0.33	ug/Kg	÷¢÷	12/10/20 11:00	12/12/20 00:38	
Bromomethane	ND	1.1	0.23	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Chloroethane	ND	11	0.82	ug/Kg	贷	12/10/20 11:00	12/12/20 00:38	
Trichlorofluoromethane	ND	2.2	0.33	ug/Kg	₽	12/10/20 11:00	12/12/20 00:38	
1,1-Dichloroethene	ND	5.5	1.2	ug/Kg	Ą	12/10/20 11:00	12/12/20 00:38	
Methylene Chloride	ND	44	11	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
rans-1,2-Dichloroethene	ND	2.2	0.44	ug/Kg	Ċ.	12/10/20 11:00	12/12/20 00:38	
1,1-Dichloroethane	ND	1.1	0.21	ug/Kg	ÿ	12/10/20 11:00	12/12/20 00:38	
2,2-Dichloropropane	ND	5.5	0.36	ug/Kg	Ц	12/10/20 11:00	12/12/20 00:38	
cis-1,2-Dichloroethene	ND	3.3	0.65	ug/Kg	ц	12/10/20 11:00	12/12/20 00:38	
Bromochloromethane	ND	2.2	0.27	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Chloroform	ND	2.2	0.33	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
1,1,1-Trichloroethane	ND	2.2	0.33	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Carbon tetrachloride	ND	2.2	0.33	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
1,1-Dichloropropene	ND	2.2	0.33	ug/Kg	Q	12/10/20 11:00	12/12/20 00:38	
Benzene	ND	2.2	0.43	ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
1,2-Dichloroethane	ND	1.1		ug/Kg	₽	12/10/20 11:00	12/12/20 00:38	
Trichloroethene	ND	2.2	0.33	ug/Kg	₽	12/10/20 11:00	12/12/20 00:38	
1,2-Dichloropropane	ND	2.2		ug/Kg	₽	12/10/20 11:00	12/12/20 00:38	
Dibromomethane	ND	1.1	0.19	ug/Kg	ф	12/10/20 11:00	12/12/20 00:38	
Bromodichloromethane	ND	1.1		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
cis-1,3-Dichloropropene	ND	1.1		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Toluene	ND	11		ug/Kg	÷¢	12/10/20 11:00	12/12/20 00:38	
trans-1,3-Dichloropropene	ND	11		ug/Kg	æ	12/10/20 11:00	12/12/20 00:38	
1,1,2-Trichloroethane	ND	2.2		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Tetrachloroethene	ND	2.2		ug/Kg		12/10/20 11:00	12/12/20 00:38	
1,3-Dichloropropane	ND	2.2		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Dibromochloromethane	ND	1.6		ug/Kg	\$	12/10/20 11:00	12/12/20 00:38	
1,2-Dibromoethane	ND	1.1		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Chlorobenzene	ND	2.2		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
Ethylbenzene	ND	2.2		ug/Kg	ö		12/12/20 00:38	
1,1,1,2-Tetrachloroethane	ND	3.3		ug/Kg	÷.	12/10/20 11:00		
1,1,2,2-Tetrachloroethane	ND	4.4		ug/Kg	₽	12/10/20 11:00		
m-Xylene & p-Xylene	ND	11		ug/Kg	#			
o-Xylene	ND	5.5		ug/Kg		12/10/20 11:00	12/12/20 00:38	
Styrene	ND	3.3		ug/Kg	¢		12/12/20 00:38	
Bromoform	ND	5.5		ug/Kg	¢		12/12/20 00:38	
Isopropylbenzene	ND	2.2		ug/Kg			12/12/20 00:38	• • • • • • •
Bromobenzene	ND	11	1.1		¢	12/10/20 11:00	12/12/20 00:38	
N-Propylbenzene	ND	5.5		ug/Kg	¢	12/10/20 11:00	12/12/20 00:38	
1,2,3-Trichloropropane	ND	5.5	1.1		÷.	12/10/20 11:00		
2-Chlorotoluene	ND	5.5	1.1		¢	12/10/20 11:00	12/12/20 00:38	
	ND	5.5		ug/Kg	ф	12/10/20 11:00		
1,3,5-Trimethylbenzene			1.1			12/10/20 11:00		
4-Chlorotoluene	ND ND	5.5 3.3			¢		12/12/20 00:38	
t-Butylbenzene		ა.ა 5.5		ug/Kg		12/10/20 11:00		
1,2,4-Trimethylbenzene sec-Butylbenzene	ND ND	5.5 3.3		ug/Kg ug/Kg	¢	12/10/20 11:00		

Client Sample ID: 20-C025912

Date Collected: 12/09/20 14:00 Date Received: 12/10/20 10:00

Lab Sample ID: 580-99649-3 Matrix: Solid

Percent Solids: 94.0

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		26	5.3	ug/Kg		12/15/20 11:55	12/16/20 16:17	1
2,6-Dinitrotoluene	ND		160	16	ug/Kg	ġ	12/15/20 11:55	12/16/20 16:17	1
3-Nitroaniline	ND		320	110	ug/Kg	q	12/15/20 11:55	12/16/20 16:17	1
Acenaphthene	ND		42	4.g	ug/Kg	‡	12/15/20 11:55	12/16/20 16:17	1
2,4-Dinitrophenol	ND		2100	620	ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
1-Nitrophenol	ND		2100	180	ug/Kg	₽	12/15/20 11:55	12/16/20 16:17	1
Dibenzofuran	ND		160	6.3	ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
2,4-Dinitrotoluene	ND		210	46	ug/Kg	A	12/15/20 11:55	12/16/20 16:17	1
Diethyl phthalate	ND		420	23	ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
4-Chlorophenyl phenyl ether	ND		210		ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
Fluorene	ND		26	5.3	ug/Kg	ġ	12/15/20 11:55	12/16/20 16:17	1
4-Nitroaniline	ND		160		ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	φ	12/15/20 11:55	12/16/20 16:17	1
N-Nitrosodiphenylamine	ND		64	8.5	ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
4-Bromophenyl phenyl ether	ND		210		ug/Kg	¢	12/15/20 11:55		1
lexachlorobenzene	ND		53		ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
Pentachlorophenol	ND		420	67	ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
Phenanthrene	ND		64	6.1	ug/Kg		12/15/20 11:55	12/16/20 16:17	1
Anthracene	ND		64		ug/Kg		12/15/20 11:55		1
Di-n-butyl phthalate	ND		530		ug/Kg	ġ	12/15/20 11:55	12/16/20 16:17	1
luoranthene	ND		42		ug/Kg		12/15/20 11:55		1
² yrene	ND		64		ug/Kg		12/15/20 11:55		 1
-yrene Butyl benzyl phthalate	ND		210	54		ф	12/15/20 11:55	12/16/20 16:17	1
3,3'-Dichlorobenzidine	ND	*_	420		ug/Kg ug/Kg	× ¢	12/15/20 11:55	12/16/20 16:17	1
Benzo[a]anthracene	ND		420		ug/Kg		12/15/20 11:55		· · · · · · · · · · · · · · · · · · ·
	ND		42 64	12		ф ф	12/15/20 11:55	12/16/20 16:17	1
Chrysene	ND		640		ug/Kg ug/Kg		12/15/20 11:55		1
Bis(2-ethylhexyl) phthalate	ND		160		ug/Kg		12/15/20 11:55		' · · · · · · · · · 1
Di-n-octyl phthalate	ND		64		ug/Kg ug/Kg	*	12/15/20 11:55	12/16/20 16:17	1
Benzo[a]pyrene	ND		42		ug/Kg ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
ndeno[1,2,3-cd]pyrene	ND		53		ug/Kg ug/Kg	¢.	12/15/20 11:55	12/16/20 16:17	1
Dibenz(a,h)anthracene	ND		53 64		ug/Kg ug/Kg	¢	12/15/20 11:55	12/16/20 16:17	1
Benzo[g,h,i]perylene			64 160				12/15/20 11:55		1
	ND				ug/Kg	Å.	12/15/20 11:55	12/16/20 16:17	
1-Methylnaphthalene	ND		32		ug/Kg				ा न
Benzo[b]fluoranthene	ND		42		ug/Kg	¥	12/15/20 11:55		ן: ג
Benzo[k]fluoranthene	ND		64		ug/Kg	₽ 	12/15/20 11:55		
bis(chloroisopropyl) ether	ND	* +	210	6.5	ug/Kg	¢.	12/15/20 11:55	12/16/20 16:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	<u>90</u>		47 - 119					12/16/20 16:17	1
Phenol-d5 (Surr)	88		59 - 120				-	12/16/20 16:17	1
Vitrobenzene-d5 (Surr)	97		54 - 120					12/16/20 16:17	1
2-Fluorobiphenyl	98		57 - 120					12/16/20 16:17	· · · · · · · · 1
	98 78		57 - 120 52 - 115					12/16/20 16:17	1
2,4,6-Tribromophenol (Surr) Terphenyl-d14 (Surr)	78 94		52 - 115 73 - 125					12/16/20 16:17	
rerphenyi-u 14 (Suff)	94		10-120				12/10/20 11.00	12/10/20 10.11	
Method: NWTPH-Gx - Nort	hwest - Volatile	e Petroleur	n Products (GC)					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline								12/16/20 19:00	

Source of the second se

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-34539 Matrix: Solid							ole ID: Metho Prep Type: T	
Analysis Batch: 345537							Prep Batch:	345397
Analyte	MB I Result	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	 2.0	0.49	ug/Kg		12/11/20 16:40		
Chloromethane	ND	5.0		ug/Kg		12/11/20 16:40		
Vinyl chloride	ND	2.0		ug/Kg			12/11/20 20:46	
Bromomethane	ND	 1.0		ug/Kg			12/11/20 20:46	
Chloroethane	ND	10		ug/Kg			12/11/20 20:46	
Trichlorofluoromethane	ND	2.0		ug/Kg			12/11/20 20:46	
1,1-Dichloroethene	ND	5.0		ug/Kg			12/11/20 20:46	•••••
Methylene Chloride	ND	40		ug/Kg			12/11/20 20:46	
	ND	2.0		ug/Kg			12/11/20 20:46	
trans-1,2-Dichloroethene		 1.0		ug/Kg			12/11/20 20:46	•••••••••••••••••••••••••••••••••••••••
1,1-Dichloroethane	ND	5.0		ug/Kg		12/11/20 16:40		
2,2-Dichloropropane	ND					12/11/20 16:40		
cis-1,2-Dichloroethene	ND	 3.0		ug/Kg			12/11/20 20:46	
Bromochloromethane	ND	2.0		ug/Kg			12/11/20 20:46	
Chloroform	ND ND	2.0		ug/Kg				
1,1,1-Trichloroethane	ND	2.0		ug/Kg		12/11/20 16:40	a a second contract of the second	
Carbon tetrachloride	ND	2.0		ug/Kg			12/11/20 20:46	
1,1-Dichloropropene	ND	2.0		ug/Kg		12/11/20 16:40		
Benzene	ND	 2.0		ug/Kg		12/11/20 16:40		
1,2-Dichloroethane	ND	1.0		ug/Kg			12/11/20 20:46	
Trichloroethene	ND	2.0		ug/Kg			12/11/20 20:46	
1,2-Dichloropropane	ND	 2.0		ug/Kg			12/11/20 20:46	
Dibromomethane	ND	1.0	0.17	ug/Kg			12/11/20 20:46	
Bromodichloromethane	ND	1.0	0.18	ug/Kg		12/11/20 16:40	12/11/20 20:46	
cis-1,3-Dichloropropene	ND	1.0	0.20	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Toluene	ND	10	1.3	ug/Kg		12/11/20 16:40	12/11/20 20:46	
trans-1,3-Dichloropropene	ND	10	0.60	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,1,2-Trichloroethane	ND	2.0	0.25	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Tetrachloroethene	ND	 2.0	0.40	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,3-Dichloropropane	ND	2.0	0.23	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Dibromochloromethane	ND	1.5	0.27	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,2-Dibromoethane	ND	 1.0	0.20	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Chlorobenzene	ND	2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Ethylbenzene	ND	2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,1,1,2-Tetrachloroethane	ND	 3.0		ug/Kg			12/11/20 20:46	
1,1,2,2-Tetrachloroethane	ND	4.0		ug/Kg			12/11/20 20:46	
m-Xylene & p-Xylene	ND	10		ug/Kg			12/11/20 20:46	
	ND	 5.0		ug/Kg			12/11/20 20:46	
o-Xylene	ND	3.0		ug/Kg			12/11/20 20:46	
Styrene	ND	5.0		ug/Kg			12/11/20 20:46	
Bromoform		 2.0		ug/Kg			12/11/20 20:40	
Isopropylbenzene	ND						12/11/20 20:40	
Bromobenzene	ND	10 5.0		ug/Kg			12/11/20 20:46	
N-Propylbenzene	ND	5.0		ug/Kg				
1,2,3-Trichloropropane	ND	5.0		ug/Kg			12/11/20 20:46	
2-Chlorotoluene	ND	5.0		ug/Kg			12/11/20 20:46	
1,3,5-Trimethylbenzene	ND	 5.0		ug/Kg			12/11/20 20:46	
4-Chlorotoluene	ND	5.0		ug/Kg			12/11/20 20:46	
t-Butylbenzene	ND	3.0		ug/Kg			12/11/20 20:46	
1,2,4-Trimethylbenzene	ND	5.0	1.2	ug/Kg		12/11/20 16:40	12/11/20 20:46	

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-345397/2-A Matrix: Solid Analysis Batch: 345537				Clier	nt Sample ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 345397
	Spike	LCS	LCS			%Rec.
Analyte	Added		Qualifier	Unit	D %Rec	Limits
Toluene	20.0	18.2		ug/Kg	91	75 - 137
trans-1,3-Dichloropropene	20.0	18.3		ug/Kg	91	80 - 121
1,1,2-Trichloroethane	20.0	20.1		ug/Kg	101	80 - 123
Tetrachloroethene	20.0	17.3		ug/Kg	87	58 - 150
1,3-Dichloropropane	20.0	19.3		ug/Kg	96	75 - 120
Dibromochloromethane	20.0	18.8		ug/Kg	94	75 - 132
1,2-Dibromoethane	20.0	20.6		ug/Kg	103	77 - 123
Chlorobenzene	20.0	18.3		ug/Kg	91	80 - 131
Ethylbenzene	20.0	19.6		ug/Kg	98	80 - 135
1,1,1,2-Tetrachloroethane	20.0	18.4		ug/Kg	92	79 - 128
1,1,2,2-Tetrachloroethane	20.0	19.3		ug/Kg	97	77 - 127
m-Xylene & p-Xylene	20.0	17.1		ug/Kg	86	80 - 132
o-Xylene	20.0	19.1		ug/Kg	95	80 - 132
Styrene	20.0	18.4		ug/Kg	92	79 - 129
Bromoform	20.0	19.0		ug/Kg	95	71 - 146
Isopropylbenzene	20.0	18.9		ug/Kg	94	81 - 140
Bromobenzene	20.0	19.2		ug/Kg	96	78 - 126
N-Propylbenzene	20.0	17.8		ug/Kg	89	68 - 149
1,2,3-Trichloropropane	20.0	19.7		ug/Kg	98	77 - 127
2-Chlorotoluene	20.0	16.6		ug/Kg	83	77 - 134
1,3,5-Trimethylbenzene	20.0	17.8		ug/Kg	89	72 - 142
4-Chlorotoluene	20.0	16.8		ug/Kg	84	71 - 137
t-Butylbenzene	20.0	17.4		ug/Kg	87	72 - 144
1,2,4-Trimethylbenzene	20.0	17.8		ug/Kg	89	73 - 138
sec-Butylbenzene	20.0	18.0		ug/Kg	90	71 - 143
1,3-Dichlorobenzene	20.0	18.3		ug/Kg	91	78 - 132
4-IsopropyItoluene	20.0	17.8		ug/Kg	89	71 - 142
1,4-Dichlorobenzene	20.0	18.4		ug/Kg	92	77 - 123
n-Butylbenzene	20.0	16.8		ug/Kg	84	69 - 143
1,2-Dichlorobenzene	20.0	18.5		ug/Kg	93	78 - 126
1,2-Dibromo-3-Chloropropane	20.0	20.1		ug/Kg	100	75 - 129
1,2,4-Trichlorobenzene	20.0	20.0		ug/Kg	100	74 - 131
1,2,3-Trichlorobenzene	20.0	19.5		ug/Kg	97	68 - 136
Hexachlorobutadiene	20.0	18.6		ug/Kg	93	65 - 150
Naphthalene	20.0	21.5		ug/Kg	107	64 - 136
Methyl tert-butyl ether	20.0	24.0		ug/Kg	120	77 - 132
LCS LC						
Surrogate %Recovery Q						
Toluene-d8 (Surr) 93	80 - 120					
4-Bromofluorobenzene (Surr) 104	80 - 120					
Dibromofluoromethane (Surr) 104	80 - 120					

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 58 Matrix: Solid	0-345397/3-A				C	Client Sa	Prep Ty	Control Sample Dup Prep Type: Total/NA			
Analysis Batch: 345537			Spike	LCSD			_		Prep Ba %Rec.		RPD
Analyte			Added		Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limi
sec-Butylbenzene			20.0	18.5		ug/Kg		93	71 - 143	3	40
1,3-Dichlorobenzene			20.0	19.2		ug/Kg		96	78 - 132	5	4(
4-Isopropyltoluene			20.0	18.6		ug/Kg		93	71 - 142	5	4(
1,4-Dichlorobenzene			20.0	19.3		ug/Kg		96	77 - 123	4	4(
n-Butylbenzene			20.0	17.7		ug/Kg		88	69 - 143	6	4(
1,2-Dichlorobenzene			20.0	19.4		ug/Kg		97	78 - 126	4	4(
1,2-Dibromo-3-Chloropropane			20.0	19.0		ug/Kg		95	75 - 129	5	4(
1,2,4-Trichlorobenzene			20.0	20.4		ug/Kg		102	74 - 131	2	4(
1,2,3-Trichlorobenzene			20.0	19.3		ug/Kg		97	68 - 136	1	4(
Hexachlorobutadiene			20.0	18.6		ug/Kg		93	65 - 150	0	36
Naphthalene			20.0	20.8		ug/Kg		104	64 - 136	3	4(
Methyl tert-butyl ether			20.0	25.0		ug/Kg		125	77 - 132	4	25
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	91		80-120								
4-Bromofluorobenzene (Surr)	102		80-120								
Dibromofluoromethane (Surr)	104		80-120								
1,2-Dichloroethane-d4 (Surr)	109		80 - 121								

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-345599/1-A	
Matrix: Solid	
Analysis Batch: 345700	

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 345599

Allalysis Daton. 343700								riop matorin .	010000
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		150	23	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Bis(2-chloroethyl)ether	ND		100	7.7	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Chlorophenol	ND		200	4.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,3-Dichlorobenzene	ND		50	4.8	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,4-Dichlorobenzene	ND		50	8.3	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzyl alcohol	ND		1000	50	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,2-Dichlorobenzene	ND		50	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Methylphenol	ND		150	9.8	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
N-Nitrosodi-n-propylamine	ND		200	22	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Hexachloroethane	ND		150	4.3	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Nitrobenzene	ND		200	20	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Isophorone	ND		150	8.4	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Nitrophenol	ND		200	6.2	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4-Dimethylphenol	ND		200	60	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzoic acid	ND		4000	1200	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Bis(2-chloroethoxy)methane	ND		200	18	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4-Dichlorophenol	ND		200	60	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,2,4-Trichlorobenzene	ND		50	6.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Naphthalene	34.8		25	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Chloroaniline	ND		1500	130	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Hexachlorobutadiene	ND		50	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Chloro-3-methylphenol	ND		150	33	ug/Kg		12/15/20 11:55	12/16/20 14:46	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-34 Matrix: Solid Analysis Batch: 345700	5599/1-A						Client Sam	ole ID: Method Prep Type: To Prep Batch: 3	otal/NA
	МВ	МВ							
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dil Fa
Nitrobenzene-d5 (Surr)	97		54 - 120				12/15/20 11:55		
2-Fluorobiphenyl	106		57 - 120				12/15/20 11:55	12/16/20 14:46	
2,4,6-Tribromophenol (Surr)	53		52 - 115					12/16/20 14:46	
Terphenyl-d14 (Surr)	115		73 - 125				12/15/20 11:55	12/16/20 14:46	
Lab Sample ID: LCS 580-34 Matrix: Solid Analysis Batch: 346684	45599/2 - A		Spike	LCS	LCS	Clie	nt Sample ID:	Lab Control S Prep Type: To Prep Batch: 3 %Rec.	otal/N/
Analyte			Added		Qualifier	Unit	D %Rec	Limits	
Phenol			1000	935		ug/Kg	$-\frac{1}{2}$ $\frac{1}{94}$ -	59 - 120	
Bis(2-chloroethyl)ether			1000	1180		ug/Kg	118	61 - 120	
2-Chlorophenol			1000	985		ug/Kg ug/Kg	99	66 - 120	
			1000	1010		ug/Kg	101	57 - 120	
1,3-Dichlorobenzene 1,4-Dichlorobenzene			1000	1010		ug/Kg ug/Kg	101	57 - 120 57 - 120	
Benzyl alcohol			1000	417	.1	ug/Kg ug/Kg	42	10 - 134	
1,2-Dichlorobenzene			1000	1000		ug/Kg	100	62 - 120	
			1000	800		ug/Kg	80	53 - 120	
2-Methylphenol			1000	838		ug/Kg	84	54 - 120	
3 & 4 Methylphenol			1000	1180		ug/Kg	118	56 - 138	
N-Nitrosodi-n-propylamine			1000	1110			110	57 - 132	
Hexachloroethane				1260		ug/Kg	126	57 - 132 57 - 128	
Nitrobenzene			1000			ug/Kg		61 - 128	
Isophorone			1000	1200 996		ug/Kg	120 100	49 - 123	
2-Nitrophenol			1000			ug/Kg		49 - 123 31 - 129	
2,4-Dimethylphenol			1000	450		ug/Kg	45	10 - 120	
Benzoic acid			2000	ND		ug/Kg	18		
Bis(2-chloroethoxy)methane			1000	1180		ug/Kg	118	60 - 120	
2,4-Dichlorophenol			1000	922		ug/Kg	92	63 - 120	
1,2,4-Trichlorobenzene			1000	1060		ug/Kg	106	66 - 120	
Naphthalene			1000	1030		ug/Kg	103	68 - 120	
4-Chloroaniline			1000	136	J	ug/Kg	14	10 - 120	
Hexachlorobutadiene			1000	1090		ug/Kg	109	64 - 130	
4-Chloro-3-methylphenol			1000	727		ug/Kg	73	55-120	
2-Methylnaphthalene			1000	1050		ug/Kg	105	70 - 120	
Hexachlorocyclopentadiene			1000	889		ug/Kg	89	53 - 131	
2,4,6-Trichlorophenol			1000	911		ug/Kg	91	37 - 120	
2,4,5-Trichlorophenol			1000	645		ug/Kg	64	41 - 120	
2-Chloronaphthalene			1000	1010		ug/Kg	101	65-120	
2-Nitroaniline			1000	<u>g</u> 9g		ug/Kg	100	54 - 126	
Dimethyl phthalate			1000	1050		ug/Kg	105	71 - 120	
Acenaphthylene			1000	1010		ug/Kg	101	63 - 120	
2,6-Dinitrotoluene			1000	1080		ug/Kg	108	70 - 126	
3-Nitroaniline			1000	425		ug/Kg	43	34 - 120	
Acenaphthene			1000	1080		ug/Kg	108	64 - 120	
2,4-Dinitrophenol			2000	1280		ug/Kg	64	10 - 139	
4-Nitrophenol			2000	716	J	ug/Kg	36	10 - 140	
Dibenzofuran			1000	1080		ug/Kg	108	68 - 120	• • • •
2,4-Dinitrotoluene			1000	1050		ug/Kg	105	63 - 120	

North Contractor Statistical In-

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99593- Matrix: Solid	A-4-U MS						G	ient Sa	-	Matrix Spike /pe: Total/NA
Analysis Batch: 345700										atch: 345599
·	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzyl alcohol	ND		1050	1080	4	ug/Kg	¢	104	10 - 134	
1,2-Dichlorobenzene	ND		1050	964		ug/Kg	¢	92	62 - 120	
2-Methylphenol	ND		1050	882		ug/Kg	Ŕ	84	53 - 120	
3 & 4 Methylphenol	ND		1050	863		ug/Kg	Ċ.	83	54 - 120	
N-Nitrosodi-n-propylamine	ND		1050	1190		ug/Kg	÷	114	56 - 138	
Hexachloroethane	ND		1050	938		ug/Kg	ψ	90	57 - 132	
Nitrobenzene	ND		1050	1130		ug/Kg	¢	108	57 - 128	
Isophorone	ND		1050	1110		ug/Kg	₩	106	61 - 128	
2-Nitrophenol	ND		1050	1020		ug/Kg	¢	98	49 - 123	
2,4-Dimethylphenol	ND	F2 F1	1050	889		ug/Kg	₽	85	31 - 129	
Benzoic acid	ND	F1	2090	ND	F1	ug/Kg	¢	0	10 - 120	
Bis(2-chloroethoxy)methane	ND		1050	1060		ug/Kg	¢	101	60 - 120	
2,4-Dichlorophenol	ND	F2	1050	1040		ug/Kg	ġ	99	63 - 120	
1,2,4-Trichlorobenzene	ND		1050	1040		ug/Kg	ά	99	66 - 120	
Naphthalene	ND		1050	985		ug/Kg	¢	94	68 - 120	
4-Chloroaniline		F1 *-	1050	ND	F1	ug/Kg	¢	0	10 - 120	
Hexachlorobutadiene	ND		1050	994		ug/Kg	¢÷	95	64 - 130	
4-Chloro-3-methylphenol	ND	F2	1050	1230		ug/Kg	¢	118	55 - 120	
2-Methylnaphthalene	ND	. –	1050	1050		ug/Kg	¢	100	70 - 120	
Hexachlorocyclopentadiene	ND		1050	437	F1	ug/Kg		42	53 - 131	
2,4,6-Trichlorophenol		F2	1050	1080		ug/Kg	₽	104	37 - 120	
2,4,5-Trichlorophenol	ND		1050	870		ug/Kg	₽	83	41 - 120	
2-Chloronaphthalene	ND	· - · · · ·	1050	1120		ug/Kg	с. (²⁷) ф	107	65 - 120	
2-Nitroaniline		F2	1050	1110		ug/Kg	¢	106	54 - 126	
Dimethyl phthalate	ND		1050	1060		ug/Kg	¢	100	71 - 120	
Acenaphthylene	and a second second second	F2	1050	1090		ug/Kg	ц. ф	104	63 - 120	
2,6-Dinitrotoluene		F2	1050	1100		ug/Kg	¢	101	70 - 126	
3-Nitroaniline	ND		1050	600		ug/Kg	¢	57	34 - 120	
	ND		1050	1110		ug/Kg	Ť. ¢	106	64 - 120	
Acenaphthene		F1 *-	2090	ND	E1	ug/Kg ug/Kg	¢	0	10 - 139	
2,4-Dinitrophenol	ND	FI -	2090	1870		ug/Kg ug/Kg	¢	90	10 - 133	
4-Nitrophenol					J				68 - 120	
Dibenzofuran	ND	F2	1050	1110		ug/Kg	¢	106		
2,4-Dinitrotoluene	ND		1050	1040		ug/Kg	¢	100	63 - 120 66 - 135	
Diethyl phthalate	ND		1050	1080		ug/Kg	¢	103		
4-Chlorophenyl phenyl ether	ND		1050	1120		ug/Kg	¢	107	70 - 120	
Fluorene		F2	1050	1070		ug/Kg	₿ 	103	68 - 121	
4-Nitroaniline	ND		1050	978		ug/Kg	₩	94	36-141	
4,6-Dinitro-2-methylphenol	ND		2090	292	J	ug/Kg	\$.	14	13 - 141	
N-Nitrosodiphenylamine		F2 F1	1050	1070		ug/Kg	¢	102	67 - 128	
4-Bromophenyi phenyl ether	ND		1050	1130		ug/Kg		108	65 - 127	
Hexachlorobenzene	ND		1050	1060		ug/Kg	Ø	101	65 - 126	
Pentachlorophenol	ND		2090	1410		ug/Kg	¢	67	10 - 120	
Phenanthrene	ND		1050	1060		ug/Kg	¢	101	68 - 126	
Anthracene	ND		1050	1070		ug/Kg	¢	102	67 - 131	
Di-n-butyl phthalate	ND		1050	1160		ug/Kg	¢	111	66 - 150	
Fluoranthene	ND	F2	1050	1140		ug/Kg	₽	109	69 - 133	
Pyrene	ND		1050	1130		ug/Kg	¢	108	68 _ 141	
Butyl benzyl phthalate	ND		1050	1010		ug/Kg	¢	97	58 - 150	
3,3'-Dichlorobenzidine	ND	F1	2090	1510		ug/Kg	Ŕ	72	49 - 148	

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99593-/ Matrix: Solid Analysis Batch: 345700	4-4-d MSE)				Client :	Samp	le ID: N	latrix Spike Duplicate Prep Type: Total/NA Prep Batch: 345599			
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi	
Hexachlorobutadiene	ND		1050	850		ug/Kg	¢	81	64 - 130	16	19	
4-Chloro-3-methylphenol	ND	F2	1050	898	F2	ug/Kg	Ŕ	86	55 - 120	31	25	
2-Methylnaphthalene	ND		1050	899		ug/Kg	\$	86	70 - 120	15	2'	
Hexachlorocyclopentadiene	ND	F1	1050	466	F1	ug/Kg	÷	45	53 - 131	6	21	
2,4,6-Trichlorophenol	ND	F2	1050	849	F2	ug/Kg	÷	81	37 - 120	24	20	
2,4,5-Trichlorophenol	ND	F2	1050	617	F2	ug/Kg	¢.	59	41 - 120	34	23	
2-Chloronaphthalene	ND		1050	911		ug/Kg	₿.	87	65 - 120	20	21	
2-Nitroaniline	ND	F2	1050	848	F2	ug/Kg	¢	81	54 - 126	27	16	
Dimethyl phthalate	ND	F2	1050	839	F2	ug/Kg	¢	80	71 - 120	23	21	
Acenaphthylene	ND	F2	1050	844	F2	ug/Kg	ġ	81	63 - 120	26	18	
2,6-Dinitrotoluene	ND	F2	1050	891	F2	ug/Kg	¢	85	70 - 126	21	18	
3-Nitroaniline	ND	F2	1050	382	F2	ug/Kg	¢	37	34 - 120	44	25	
Acenaphthene	ND	F2	1050	905	F2	ug/Kg	₽	87	64 - 120	20	19	
2,4-Dinitrophenol	ND	F1 *-	2090	ND	F1	ug/Kg	¢	0	10 - 139	NC	40	
4-Nitrophenol	ND		2090	1530	J	ug/Kg	¢	73	10 - 140	20	31	
Dibenzofuran	ND	F2	1050	905	F2	ug/Kg	¢.	87	68 - 120	20	18	
2,4-Dinitrotoluene	ND		1050	826		ug/Kg	¢	79	63 - 120	23	23	
Diethyl phthalate	ND		1050	865		ug/Kg	¢	83	66 - 135	22	22	
4-Chlorophenyl phenyl ether	ND	F2	1050	871	F2	ug/Kg	¢	83	70 - 120	25	21	
Fluorene	ND	F2	1050	854	F2	ug/Kg	⇔	82	68 - 121	23	17	
4-Nitroaniline	ND	F2	1050	616	F2	ug/Kg	₽	59	36 - 141	45	23	
4,6-Dinitro-2-methylphenol	ND	F2	2090	477	J F2	ug/Kg	☆	23	13 - 141	48		
N-Nitrosodiphenylamine	ND	F2 F1	1050	218	F2 F1	ug/Kg	¢	21	67 - 128	132	30	
4-Bromophenyl phenyl ether	ND		1050	888		ug/Kg	₽	85	65 - 127	24	32	
Hexachlorobenzene	ND		1050	853		ug/Kg	 Ф	82	65 - 126	21	32	
Pentachlorophenol	ND		2090	1080		ug/Kg	₽	52	10 - 120	26	40	
Phenanthrene	ND		1050	866		ug/Kg	¢	83	68 - 126	20	27	
Anthracene	ND		1050	863		ug/Kg	₽	83	67 - 131	21	28	
Di-n-butyl phthalate	ND		1050	935		ug/Kg	¢	89	66 - 150	21	26	
Fluoranthene	ND	F2	1050	896	F2	ug/Kg	¢	86	69 - 133	24	21	
Pyrene	ND	•	1050	913	· · - · · · · · · ·	ug/Kg		87	68 - 141	21		
Butyl benzyl phthalate	ND		1050	996		ug/Kg	æ	95	58 - 150	_1	27	
3,3'-Dichlorobenzidine	ND	F1	2090	ND	F1	ug/Kg	¢	0	49 - 148	NC	40	
Benzo[a]anthracene	ND		1050	953		ug/Kg		91	60 - 135	4	21	
Chrysene	ND		1050	969		ug/Kg	¢	93	69 - 127	1	27	
Bis(2-ethylhexyl) phthalate	ND		1050	1000		ug/Kg	¢	96	45 - 150	3	25	
Di-n-octyl phthalate	ND		1050	1340		ug/Kg	. ~~. \$\$	128			18	
	ND			939				90	62 - 129	14	27	
Benzo[a]pyrene			1050 1050	939 588		ug/Kg ug/Kg	¢ ¢	90 56	62 - 129 52 - 146	14	30	
Indeno[1,2,3-cd]pyrene	ND			662					52 - 146 59 - 139	6	29	
Dibenz(a,h)anthracene		F1 *-	1050 1050	493	E 1	ug/Kg	\$7 75	63 47	59 - 139 64 - 146	13	28 26	
Benzo[g,h,i]perylene		r" =	1050		ст	ug/Kg	¢					
Carbazole	ND		1050	1010		ug/Kg		97	43 - 150	22		
1-Methylnaphthalene	ND		1050	938		ug/Kg	д. Ф	90	69 - 120	13	24	
Benzo[b]fluoranthene	ND		1050	1160		ug/Kg	\$	111	58 - 136	9	25	
Benzo[k]fluoranthene bis(chloroisopropyl) ether	ND	F1 *+	1050	1190 1450		ug/Kg	\$	113	68 - 123	3	18	

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-346	259/1-A							Clie		le ID: Metho	
Matrix: Solid										Prep Type: T	
Analysis Batch: 346294	MB	мв								Prep Batch:	340235
Analyte		Qualifier	RL	1	MDL	Unit	D	Р	repared	Analyzed	Dil Fac
Dibenzofuran	ND		150		5.9	ug/Kg			2/20 18:55	12/23/20 16:07	1
2,4-Dinitrotoluene	ND		200	••••		ug/Kg		12/2	2/20 18:55	12/23/20 16:07	1
Diethyl phthalate	ND		400			ug/Kg				12/23/20 16:07	1
4-Chlorophenyl phenyl ether	ND		200			ug/Kg			2/20 18:55	12/23/20 16:07	1
Fluorene	ND		25			ug/Kg			2/20 18:55	12/23/20 16:07	1
4-Nitroaniline	ND		1 <i>5</i> 0		50	ug/Kg			2/20 18:55	12/23/20 16:07	1
4,6-Dinitro-2-methylphenol	ND		1000		100	ug/Kg				12/23/20 16:07	
N-Nitrosodiphenylamine	ND		60		8.0	ug/Kg				12/23/20 16:07	1
4-Bromophenyl phenyl ether	ND		200		9.1	ug/Kg				12/23/20 16:07	1
Hexachlorobenzene	ND		50		15				2/20 18:55	12/23/20 16:07	
Pentachlorophenol	ND		400		63	ug/Kg			2/20 18:55	12/23/20 16:07	
·	ND		400 60			ug/Kg				12/23/20 16:07	
Phenanthrene										12/23/20 16:07	
Anthracene	ND ND		60 500		27	ug/Kg ug/Kg				12/23/20 16:07	
Di-n-butyl phthalate			500 40			-				12/23/20 16:07	
Fluoranthene	ND					ug/Kg				12/23/20 16:07	
Pyrene	ND		60			ug/Kg					
Butyl benzyl phthalate	ND		200		51	ug/Kg				12/23/20 16:07	
3,3'-Dichlorobenzidine	ND		400		84					12/23/20 16:07	
Benzo[a]anthracene	ND		40		11	ug/Kg				12/23/20 16:07	
Chrysene	ND		60		13	5 5				12/23/20 16:07	
Bis(2-ethylhexyl) phthalate	ND		600		71					12/23/20 16:07	
Di-n-octyl phthalate	ND		1 <i>5</i> 0			ug/Kg				12/23/20 16:07	
Benzo[a]pyrene	ND		60		13	0 0				12/23/20 16:07	
Indeno[1,2,3-cd]pyrene	ND		40			ug/Kg				12/23/20 16:07	
Dibenz(a,h)anthracene	ND		50			ug/Kg				12/23/20 16:07	
Benzo[g,h,i]perylene	ND		60			ug/Kg				12/23/20 16:07	
Carbazole	ND		1 <i>5</i> 0			ug/Kg				12/23/20 16:07	
1-Methylnaphthalene	ND		30		5.0	ug/Kg				12/23/20 16:07	
Benzo[b]fluoranthene	ND		40		10	ug/Kg		12/2	2/20 18:55	12/23/20 16:07	
Benzo[k]fluoranthene	ND		60			ug/Kg		12/2	2/20 18:55	12/23/20 16:07	
bis(chloroisopropyl) ether	ND		200		6.1	ug/Kg		12/2	2/20 18:55	12/23/20 16:07	
	MB	МВ									
Surrogate	%Recovery		Limits					P	repared	Analyzed	Dil Fa
2-Fluorophenol (Surr)	<u></u>	Quanner	47 - 119		•				2/20 18:55		Dirra
	83		47 - 113 59 - 120							12/23/20 16:07	
Phenol-d5 (Surr)	96		53 - 120 54 - 120							12/23/20 16:07	
Nitrobenzene-d5 (Surr)		C4 1	54 - 120 57 - 120							12/23/20 16:07	
2-Fluorobiphenyl		S1+								12/23/20 10:07	
2,4,6-Tribromophenol (Surr)	63 123		52 - 115 73 - 125							12/23/20 16:07	
^{Terphenyl-d14} (Surr) Lab Sample ID: LCS 580-34 Matrix: Solid Analysis Batch: 346294					1.00		Clien		nple ID:	Lab Control S Prep Type: T Prep Batch:	Sample otal/N/
4			Spike Addod	LCS			Unit	n	V/Dec	%Rec.	
Analyte			Added	Result	Qua	intier	Unit	_ D	%Rec	Limits	
Phenol			1000	869			ug/Kg		87	59 - 120	
Bis(2-chloroethyl)ether			1000	1080			ug/Kg		108	61 - 120	
2-Chlorophenol			1000	986			ug/Kg		99	66 - 120	

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Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid Analysis Batch: 346294	346259/2-A					Clie	nt Sar	nple ID	: Lab Control Sa Prep Type: Tol Prep Batch: 3	tal/NA
			Spike		LCS				%Rec.	
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	
Butyl benzyl phthalate			1000	939		ug/Kg		94	58 - 150	
3,3'-Dichlorobenzidine			2000	1200		ug/Kg		60	49 - 148	
Benzo[a]anthracene			1000	983		ug/Kg		98	60 - 135	
Chrysene			1000	1060		ug/Kg		106	69 - 127	
Bis(2-ethylhexyl) phthalate			1000	925		ug/Kg		92	45 - 150	
Di-n-octyl phthalate			1000	1010		ug/Kg		101	53 - 150	
Benzo[a]pyrene			1000	1070		ug/Kg		107	62 - 129	
Indeno[1,2,3-cd]pyrene			1000	890		ug/Kg		89	52 - 146	
Dibenz(a,h)anthracene			1000	1010		ug/Kg		101	59 - 139	
Benzo[g,h,i]perylene			1000	998		ug/Kg		100	64 - 146	
Carbazole			1000	1240		ug/Kg		124	43 - 150	
1-Methylnaphthalene			1000	1020		ug/Kg		102	69 - 120	
Benzo[b]fluoranthene			1000	1160		ug/Kg		116	58 - 136	
Benzo[k]fluoranthene			1000	1040		ug/Kg		104	68 - 123	
bis(chloroisopropyl) ether			1000	750		ug/Kg		75	55 - 120	
		LCS								
Surrogate	%Recovery	Qualifier	Limits							
2-Fluorophenol (Surr)	99		47 - 119							
Phenol-d5 (Surr)	95		59 - 120							
Nitrobenzene-d5 (Surr)	99		54 - 120							
2-Fluorobiphenyl	107		57 - 120							
, , ,	92		52 - 115							
2,4,6-Tribromophenol (Surr) Terphenyl-d14 (Surr)	112		52 - 115 73 - 125							0504
Terphenyl-d14 (Surr) Lab Sample ID: 580-9964 Matrix: Solid Analysis Batch: 346294	112 9-2 MS Sample	Sample	73 - 125 Spike		MS	11-14			ample ID: 20-C0 Prep Type: Tot Prep Batch: 3 %Rec.	tal/N/
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Analyte	112 9-2 MS Sample Result	Sample Qualifier	73 - 125 Spike Added	Result	MS Qualifier	Unit	D	%Rec	Prep Type: Tot Prep Batch: 3 %Rec. Limits	tal/N/
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Analyte Phenol	112 9-2 MS Sample Result ND	•	73 - 125 Spike Added 1140	Result 954		ug/Kg	D	%Rec 84	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether	112 9-2 MS Sample Result ND ND	•	73 - 125 Spike Added 1140 1140	Re sult 954 1300	Qualifier	ug/Kg ug/Kg	— <mark>D</mark> ¢	%Rec 84 114	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-9964 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol	112 9-2 MS Sample Result ND ND ND	•	73 - 125 Spike Added 1140 1140 1140	Result 954 1300 1040	Qualifier	ug/Kg ug/Kg ug/Kg	D * * *	%Rec 84 114 91	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene	112 9-2 MS Sample Result ND ND ND ND	•	73 - 125 Spike Added 1140 1140 1140 1140	Result 954 1300 1040 1150	Qualifier	ug/Kg ug/Kg ug/Kg ug/Kg		<mark>%Rec</mark> 84 114 91 101	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	112 9-2 MS Sample Result ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120	Qualifier J	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	%Rec 84 114 91 101 98	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120	tal/N/
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl alcohol	112 9-2 MS Sample Result ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND	Qualifier J	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D X X X X X X X X	%Rec 84 114 91 101 98 0	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 10 - 134	tal/N/
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene	112 9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 114	Result 954 1300 1040 1150 1120 ND 1120	Qualifier J	u9/Kg u9/K9 u9/K9 ug/K9 u9/K9 u9/K9 u9/K9		%Rec 84 114 91 101 98 0 98	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988	Qualifier J F1	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9	D X X X X X X X X	%Rec 84 114 91 101 98 0	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120 53 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-9964 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865	Qualifier J F1	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/Kg u9/Kg		%Rec 84 114 91 101 98 0 98 87 76	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120 53 - 120 53 - 120	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190	Qualifier J F1	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9	D	%Rec 84 114 91 101 98 0 98 87	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120 53 - 120 53 - 120 54 - 120 56 - 138	tal/N/
Terphenyl-d14 (Surr) Lab Sample ID: 580-9964 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol N-Nitrosodi-n-propylamine	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190 1140	Qualifier J F1	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/Kg u9/Kg	D 2 2 2 2 2 2 2 2 2 2 2 2 2	%Rec 84 114 91 101 98 0 98 87 76	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120 53 - 120 54 - 120 56 - 138 57 - 132	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol I,3-Dichlorobenzene I,4-Dichlorobenzene Benzyl alcohol I,2-Dichlorobenzene 2-Methylphenol 8 & 4 Methylphenol N-Nitrosodi-n-propylamine Hexachloroethane	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190	Qualifier J F1	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9		%Rec 84 84 114 91 101 98 0 98 87 76 105	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120 53 - 120 53 - 120 54 - 120 56 - 138	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Banzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol N-Nitrosodi-n-propylamine Hexachloroethane Nitrobenzene	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190 1140	Qualifier J F1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg		%Rec 84 114 91 101 98 0 98 87 76 105 100	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 10 - 134 62 - 120 53 - 120 54 - 120 56 - 138 57 - 132	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-9964 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol	112 9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190 1140 1230	Qualifier J F1	ug/Kg ug/K9 ug/K9 ug/K9 ug/K9 ug/K9 ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg		%Rec 84 114 91 101 98 0 98 87 76 105 100 108	Prep Type: Tof Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 53 - 120 53 - 120 53 - 120 54 - 120 56 - 138 57 - 132 57 - 128	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Banzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol 3 & 4 Methylphenol N-Nitrosodi-n-propylamine Hexachloroethane Nitrobenzene sophorone 2-Nitrophenol	112 9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190 1140 1230 1190	Qualifier J F1 J	ug/Kg ug/K9 ug/K9 ug/K9 ug/K9 ug/K9 ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg		%Rec 84 114 91 101 98 0 98 87 76 105 100 108 104	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 57 - 120 53 - 120 53 - 120 53 - 120 54 - 120 56 - 138 57 - 132 57 - 128 61 - 128	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol 3 & 4 Methylphenol V-Nitrosodi-n-propylamine Hexachloroethane Nitrobenzene sophorone 2-Nitrophenol 2,4-Dimethylphenol	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190 1140 1230 1190 1220	Qualifier J F1 J	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9		%Rec 84 114 91 101 98 0 98 87 76 105 100 108 104 107	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 57 - 120 53 - 120 53 - 120 54 - 120 56 - 138 57 - 132 57 - 128 61 - 128 49 - 123	tal/N
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol 3 & 4 Methylphenol V-Nitrosodi-n-propylamine Hexachloroethane Nitrobenzene Isophorone 2-Nitrophenol 2,4-Dimethylphenol Benzoic acid	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	73 - 125 Spike Added 1140	Result 954 1300 1040 1150 1120 988 865 1190 1140 1230 1190 1220 788	Qualifier J F1 J	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9		%Rec 84 114 91 101 98 0 98 87 76 105 100 108 104 107 69	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 57 - 120 53 - 120 53 - 120 54 - 120 56 - 138 57 - 132 57 - 128 61 - 128 49 - 123 31 - 129	tal/N/
Terphenyl-d14 (Surr) Lab Sample ID: 580-99644 Matrix: Solid Analysis Batch: 346294 Analyte Phenol Bis(2-chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol N-Nitrosodi-n-propylamine Hexachloroethane Nitrobenzene Isophorone	9-2 MS Sample Result ND ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier F1	73 - 125 Spike Added 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 1140 2280	Result 954 1300 1040 1150 1120 ND 1120 988 865 1190 1140 1230 1190 1220 788 ND	Qualifier J F1 J	u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9 u9/K9		%Rec 84 114 91 101 98 0 98 87 76 105 100 108 104 107 69 NC NC	Prep Type: Tot Prep Batch: 3 %Rec. Limits 59 - 120 61 - 120 66 - 120 57 - 120 57 - 120 57 - 120 57 - 120 57 - 120 53 - 120 53 - 120 54 - 120 56 - 138 57 - 132 57 - 128 61 - 128 49 - 123 31 - 129 10 - 120	tal/N/

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99649 Matrix: Solid Analysis Batch: 346294	9-2 MS						С	lient S	ample ID: Prep Ty Prep Ba	pe: Tot	al/NA
	MS	MS									
Surrogate	%Recovery		Limits								
2-Fluorophenol (Surr)	87		47 - 119								
Phenol-d5 (Surr)	87		59 - 120								
Nitrobenzene-d5 (Surr)	102		54 - 120								
2-Fluorobiphenyl	98		57 - 120								
2,4,6-Tribromophenol (Surr)	72		52-115								
Terphenyl-d14 (Surr)	101		73 - 125								
							~	1		00.000	
Lab Sample ID: 580-99649	1-2 MSD						C	lient S	ample ID:		
Matrix: Solid									Prep Ty		
Analysis Batch: 346294	0	0	C. II.	Non	Non				Prep Ba %Rec.	atch: 34	
	-	Sample	Spike		MSD	11	D	% Dee	%Rec. Limits	RPD	RPD Limit
Analyte Phenol	ND	Qualifier	Added	893	Qualifier	Unit ug/Kg	— <u>D</u>	%Rec 81	59 - 120	<u>7</u>	30
	ND		1110	1160		ug/Kg ug/Kg	х 25	105	61 - 120	11	. 30
Bis(2-chloroethyl)ether	ND		1110	1000	1	ug/Kg ug/Kg	¥ æ	90	66 - 120	4	32
2-Chlorophenol 1,3-Dichlorobenzene				1000	J	ug/Kg		93	57 - 120	····· [†] ·· 11	29
1,3-Dichlorobenzene	ND ND		1110 1110	992		ug/Kg	÷	90	57 - 120 57 - 120	12	35
Benzyl alcohol	ND	E 1	1110	ND	F1	ug/Kg	ф 2	0	10-134	NC	40
1,2-Dichlorobenzene	ND		1110	1040		ug/Kg	æ.	94	62 - 120	7	30
2-Methylphenol	ND		1110	881		ug/Kg	¢	80	53 - 120	, 11	40
3 & 4 Methylphenol	ND		1110	854	.1	ug/Kg	¢	77	54 - 120	1	36
N-Nitrosodi-n-propylamine	ND		1110	987		ug/Kg	. ў ф	89	56 - 138	19	35
Hexachloroethane	ND		1110	1030	5	ug/Kg	¢.	93	57 - 132	10	34
Nitrobenzene	ND		1110	1110		ug/Kg	æ	100	57 - 128	10	33
Isophorone	ND		1110	1080		ug/Kg	¢.	98	61 - 128	9	31
2-Nitrophenol	ND		1110	1000	.1	ug/Kg	¢	97	49-123	13	30
2,4-Dimethylphenol	ND		1110	733		ug/Kg	¢	66	31 - 129	7	40
Benzoic acid	ND		2210	ND		ug/Kg		NC	10 - 120	NC	40
Bis(2-chloroethoxy)methane	ND		1110	1010	J	ug/Kg	÷	92	60 - 120	10	33
2,4-Dichlorophenol	ND	F2	1110		JF2	ug/Kg	¢	72	63 - 120	32	19
1,2,4-Trichlorobenzene	ND		1110	1130		ug/Kg		102	66 - 120	12	18
Naphthalene	ND		1110	1070		ug/Kg	¢	96	68 - 120	11	15
4-Chloroaniline		F1 *-	1110	ND	F1	ug/Kg	¢	0	10 - 120	NC	40
Hexachlorobutadiene	ND		1110	1200		ug/Kg	¢	108	64 - 130	10	19
4-Chloro-3-methylphenol		F1 F2	1110	1260	F2	ug/Kg	ġ	114	55 - 120	35	25
2-Methylnaphthalene	ND		1110	1050		ug/Kg	¢	95	70 - 120	12	21
Hexachlorocyclopentadiene		F1 F2	1110	368	J F1 F2	ug/Kg	₽	33	53 - 131	29	21
2,4,6-Trichlorophenol	ND		1110	993		ug/Kg	₽	90	37 - 120	1	20
2,4,5-Trichlorophenol	ND		1110	1070	J	ug/Kg	¢	97	41 - 120	1	23
2-Chloronaphthalene	ND		1110	984		ug/Kg	¢	89	65 - 120	15	21
2-Nitroaniline	ND		1110	1060		ug/Kg	¢	96	54 - 126	6	16
Dimethyl phthalate	ND		1110	916		ug/Kg	¢	83	71_120	16	21
Acenaphthylene	ND		1110	1120		ug/Kg	₽	101	63 - 120	9	18
2,6-Dinitrotoluene	ND		1110	1160		ug/Kg	ά	104	70 - 126	7	18
3-Nitroaniline	ND	F1 *-	1110	ND	F1	ug/Kg	₽	0	34 - 120	NC	25
Acenaphthene	ND		1110	1090		ug/Kg	₩	98	64 - 120	13	19
2,4-Dinitrophenol	ND		2210	ND		ug/Kg	¢	NC	10 - 139	NC	40
4-Nitrophenol	ND		2210	1060	J	ug/Kg	¢	48	10 - 140	2	31

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 580-34 Matrix: Solid Analysis Batch: 345856	45756/1 - A						Cli	ent Sam	ole ID: Metho Prep Type: 1 Prep Batch:	「otal/NA
	N	IB MB								
Surrogate	%Recove	ry Qualifier	Limits				F	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		39	50 - 150				12/	16/20 15:22	12/16/20 16:10	1
Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345856	45756/2-A		Spike	LCS	LCS	Clie	nt Sa	mple ID:	Lab Control Prep Type: 7 Prep Batch: %Rec.	rotal/NA
Analyte			Added		Qualifie	r Unit	D	%Rec	Limits	
Gasoline	******	······	40.0	37.9		mg/Kg		95	80 - 120	
						00				
	LCS L									
Surrogate	%Recovery	ualifier	Limits							
4-Bromofluorobenzene (Surr)	100		50 - 150							
Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 345856	-345756/3-A					Client Sa	mple	ID: Lab	Control Sam Prep Type: 7 Prep Batch:	otal/NA
·			Spike	LCSD	LCSD				%Rec.	RPD
Analyte			Added	Result	Qualifie	r Unit	D	%Rec	Limits RP	D Limit
Gasoline			40.0	37.6		mg/Kg			80 - 120	1 10
Surrogate 4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - N	LCSD L <u>%Recovery</u> 98	ualifier	Limits 50-150	oloun	Drod	lucts (G	~)			
Lab Sample ID: MB 580-34 Matrix: Solid	· · · · ·	Semi-vo		oleun	1 Prou			ent Samp	ole ID: Metho Prep Type: 1	otal/NA
Analysis Batch: 346129		в мв							Prep Batch:	346049
Analyte		It Qualifier	RL		MDL Uni	ί ω Γ) Р	roporod	Analyzad	Dil Fac
#2 Diesel (C10-C24)								repared 21/20 08:35	Analyzed 12/21/20 19:54	
Motor Oil (>C24-C36)	N		50		18 mg	-		21/20 08:35		
		0	00		io ing	11.9	12/2		12/2 //20 10:01	
	M	B MB								
Surrogate		ry Qualifier	Limits					repared	Analyzed	Dil Fac
o-Terphenyl	10)1	50 - 150				12/2	21/20 08:35	12/21/20 19:54	1
Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 346129	46049/2-A					Clier	nt Sai	mple ID:	Lab Control Prep Type: T Prep Batch:	otal/NA
			Spike	LCS	LCS				%Rec.	
An <i>a</i> lyte			Added	Result	Qualifie	r Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)			500	458		mg/Kg			70 - 125	
Motor Oil (>C24-C36)			500	445		mg/Kg		89	70 - 129	
	LCS L	69								
Surrogate	%Recovery Q		Limits							
o-Terphenyl	83		50 - 150							

Lab Sample ID: MB 580-34582	0/21 - A								Clie	nt Samp			
Matrix: Solid											Prep Ty		
Analysis Batch: 345924											Prep Ba	atch: 3	45820
		MB MB											
Analyte	Re	sult Qualif	ier	RL	1	MDL Uni	t	D	Pr	epared	Analy	zed	Dil Fac
Arsenic		ND		0.50		0.10 mg/	Kg	_	12/1	7/20 12:22	12/18/20	12:04	1(
Chromium		ND		1.0	0	.063 mg/	Kg		12/1	7/20 12:22	12/18/20	12:04	1(
Lab Sample ID: LCS 580-3458	20/22 - A						Clie	ent	San	nple ID:			
Matrix: Solid											Prep Ty	-	
Analysis Batch: 345924											Prep Ba	atch: 3	45820
			Spike		LCS	LCS					%Rec.		
Analyte			Added		Result	Qualifie	Unit		D	%Rec	Limits		
_ead			50.0		51.9		mg/Kg			104	80 - 120		
Cadmium			50,0		50.8		mg/Kg			102	80 - 120		
Arsenic			50.0		51.4		mg/Kg			103	80 - 120		
			50.0		52.4		mg/Kg				80 - 120		
Chromium			50.0		02.7								
Lab Sample ID: LCSD 580-345	820/23-	A					Client S	am	ple	ID: Lab	Control Prep Ty		
Matrix: Solid											Prep Ba		
Analysis Batch: 345924			0-16-		1.000						%Rec.	aicii. J	RPI
			Spike			LCSD			-	0/ D		000	
Analyte			Added			Qualifie			D	%Rec	Limits	RPD	Limi
_ead			50.0		52.4		mg/Kg			105	80 - 120	1	2
Cadmium			50.0		51.3		mg/Kg			103	80 - 120	1	20
Arsenic			50.0		52.1		mg/Kg			104	80 - 120	1	2
Chromium			50.0		52.9		mg/Kg			106	80 - 120	1	20
Lab Sample ID: 580-99593-A-1	-H MS								CI	ient Sam	nole ID: I	Matrix	Spike
Lab Sample ID: 580-99593-A-1 Matrix: Solid	-H MS								CI	ient Sam			
Matrix: Solid	-H MS								CI		Prep Ty	pe: To	tal/NA
		Sample	Snika		MS	MS			CI		Prep Ty Prep Ba	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924	Sample	Sample	Spike			MS	- Unit				Prep Ty Prep Ba %Rec.	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924 Analyte	Sample Result	Sample Qualifier	Added	*****	Result	MS Qualifie			D	%Rec	Prep Ty Prep Ba %Rec. Limits	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924 Analyte _ead	Sample Result 9.0	Qualifier	Added 39.4		Result 56.2		mg/Kg		- D #	% Rec	Prep Ty Prep Ba %Rec. Limits 80 - 120	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924 Analyte	Sample Result 9.0 0.11	Qualifier	Added 39.4 39.4		Result 56.2 47.4		mg/Kg mg/Kg		- D #	%Rec 120 120	Prep Ty Prep Ba %Rec. Limits 80 - 120 80 - 120	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924 Analyte _ead	Sample Result 9.0	Qualifier	Added 39.4 39.4 39.4 39.4		Result 56.2		mg/Kg		- D #	% Rec	Prep Ty Prep Ba %Rec. Limits 80 - 120 80 - 120 80 - 120	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924 Analyte Lead Cadmium	Sample Result 9.0 0.11	Qualifier	Added 39.4 39.4		Result 56.2 47.4		mg/Kg mg/Kg		- D #	%Rec 120 120	Prep Ty Prep Ba %Rec. Limits 80 - 120 80 - 120	pe: To	tal/NA
Matrix: Solid Analysis Batch: 345924 Lead Cadmium Arsenic Chromium Lab Sample ID: 580-99593-A-1	Sample Result 9.0 0.11 6.2 26	Qualifier	Added 39.4 39.4 39.4 39.4		Result 56.2 47.4 49.2		mg/Kg mg/Kg mg/Kg mg/Kg	: Sa	- D # # #	%Rec 120 120 109 107 le ID: Ma	Prep Ty Prep Ba %Rec. Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120	pe: To atch: 3 ke Dup	tal/N/ 45820
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Matrix: Solid Analysis Batch: 345924 Lead Cadmium Arsenic Chromium Lab Sample ID: 580-99593-A-1	Sample Result 9.0 0.11 6.2 26	Qualifier	Added 39.4 39.4 39.4 39.4		Result 56.2 47.4 49.2		mg/Kg mg/Kg mg/Kg mg/Kg	: Sa	- D # # #	%Rec 120 120 109 107 le ID: Ma	Prep Ty Prep Ba %Rec. Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120	pe: To atch: 3 ke Dup pe: To	tal/NA 45820 olicate tal/NA
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Method: 2540G - SM 2540G

Lab Sample ID: 580-9 Matrix: Solid Analysis Batch: 3455						Clie	ent Sample ID: Dup Prep Type: Tot	
_	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	89.2		89.5		%		0.3	20
Percent Moisture	10.8		10.5		%		3	20

Matrix: Solid

Matrix: Solid

Percent Solids: 94.0

No. Constant

Lab Sample ID: 580-99649-3

Lab Sample ID: 580-99649-3

Client Sample ID: 20-C025912 Date Collected: 12/09/20 14:00 Date Received: 12/10/20 10:00

	Batch	Batch		Dilution	Batch	Prepared			
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	2540G		1	345512	12/14/20 13:40	NRS	TAL SEA	

Client Sample ID: 20-C025912

Date Collected: 12/09/20 14:00 Date Received: 12/10/20 10:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			345397	12/10/20 11:00	ASJ	TAL SEA
Total/NA	Analysis	8260D		1	345537	12/12/20 00:38	CJB	TAL SEA
Total/NA	Prep	3546			345599	12/15/20 11:55	S1S	TAL SEA
Tota!/NA	Analysis	8270E		1	345700	12/16/20 16:17	W1T	TAL SEA
Total/NA	Prep	5035			345756	12/16/20 15:23	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345856	12/16/20 19:00	CJB	TAL SEA
Total/NA	Prep	3546			346049	12/21/20 08:35	ССН	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	346129	12/22/20 00:55	ADB	TAL SEA
Total/NA	Prep	3050B			345820	12/17/20 12:22	JCP	TAL SEA
Total/NA	Analysis	6020B		10	346045	12/18/20 16:49	FCW	TAL SEA
Total/NA	Prep	7471A			345887	12/18/20 09:09	JCP	TAL SEA
Total/NA	Analysis	7471A		1	345912	12/18/20 12:23	FCW	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Cascade Analytical Inc Project/Site: ANS Geo

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset II
580-99649-1	20-C025910	Solid	12/09/20 15:00	12/10/20 10:00	
580-99649-2	20-C025911	Solid	12/09/20 13:40	12/10/20 10:00	
580-99649-3	20-C025912	Solid	12/09/20 14:00	12/10/20 10:00	

Login Number: 99649 List Number: 1 Creator: Vallelunga, Diana L

Radioactivity wasn't checked or is = background as measured by a survey<br/ meter.N/AThe cooler's custody seal, if present, are intact.TrueThe cooler or samples do not appear to have been compromised or tampered with.TrueSample custody seals, if cover not appear to have been compromised or tampered with.TrueCooler Temperature is acceptable.TrueCooler Temperature is recorded.TrueCooler Temperature is recorded.TrueCoC is filled out with all pertinent information.TrueCoC is filled out with all pertinent information.TrueIs the Field Sampler's name present on COC?TrueThere are no discrepancies between the containers received and the COC.TrueSample containers have legible labels.TrueContainers are not broken or leaking.TrueSample collaction date/times are provided.TrueSample collaction date/times are provided.TrueSample containers have legible labels.TrueSample containers are used.TrueSample collaction date/times are provided.TrueSample collaction date/times are provided.TrueSample containers are used.TrueSample containers are used.TrueS	Question	Answer	Comment
Sample custody seals, if present, are intact.TrueThe cooler or samples do not appear to have been compromised or tampered with.TrueSample custody seals, if present, are intact.TrueCooler Temperature is acceptable.TrueCooler Temperature is recorded.TrueCOC is present.TrueCOC is filled out in ink and legible.TrueCOC is filled out with all pertinent information.TrueIs the Field Sampler's name present on COC?TrueThree are no discrepancies between the containers received and the COC.TrueSample containers have legible labels.TrueContainers are not broken or leaking.TrueSample collection date/times are provided.TrueSample collection date/times are used.TrueSample bottles are completely filled.TrueSample containers neesent on Cice or usedTrueSample containers are used.TrueSample collection date/times are provided.TrueSample containers neesent on Verified.TrueSample containers neesent on trueTrueSample containers neesent on the hat present.TrueSample containers are used.TrueSample containers neesent on the hat present.TrueSample containers requiring zero headspace have no headspace or bubble is comment methyle.N/AContainers requiring zero headspace have no headspace or bubble is comment methyle.N/AContainers requiring zero headspace have no headspace or bubble is comment methyle.TrueSample do not req	•	N/A	
The cooler or samples do not appear to have been compromised or tampered with.TrueSamples were received on ice.TrueCooler Temperature is acceptable.TrueCooler Temperature is acceptable.TrueCooler Temperature is recorded.TrueCOC is present.TrueCOC is filled out in ink and legible.TrueCOC is filled out with all pertinent information.TrueIs the Field Sampler's name present on COC?TrueThere are no discrepancies between the containers received and the COC.TrueSamples are received within Holding Time (excluding tests with immediate HTS)TrueContainers are not broken or leaking.TrueSample containers have legible labels.TrueSample collection date/times are provided.TrueSample bottles are completely filled.TrueSample bottles are completely filled.TrueSample preservation Verified.TrueSample preservation Verified.TrueSample Preservation Verified.TrueSample Preservation Verified.TrueSample Sample sample and present on beadspace or bubble is efform (1/4').N/AMultiphasic samples are not present.TrueSamples do not arequire splitting or compositing.True	The cooler's custody seal, if present, is intact.	True	
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Sample bottles are completely filled.TrueSample Preservation Verified.TrueThere is sufficient vol. for all requested analyses, incl. any requestedTrueMS/MSDsContainers requiring zero headspace have no headspace or bubble is <6mm (1/4").	Sample collection date/times are provided.	True	
Sample Preservation Verified.TrueThere is sufficient vol. for all requested analyses, incl. any requested MS/MSDsTrueContainers requiring zero headspace have no headspace or bubble is <6mm (1/4").	Appropriate sample containers are used.	True	
There is sufficient vol. for all requested analyses, incl. any requested True MS/MSDs N/A Containers requiring zero headspace have no headspace or bubble is N/A <6mm (1/4").	Sample bottles are completely filled.	True	
MS/MSDs Containers requiring zero headspace have no headspace or bubble is N/A <6mm (1/4").	Sample Preservation Verified.	True	
<6mm (1/4").TrueMultiphasic samples are not present.TrueSamples do not require splitting or compositing.True		True	
Samples do not require splitting or compositing. True		N/A	
	Multiphasic samples are not present.	True	
Residual Chlorine Checked. N/A	Samples do not require splitting or compositing.	True	
	Residual Chlorine Checked.	N/A	

List Source: Eurofins TestAmerica, Seattle

B-REC-2A & B-REC-2B

ENVIRONMENTAL RESULTS



ANS Geo Inc 4475 S Clinton Ave #225 South Plainfield, NJ 07080

Laboratory Number: 20-C025478 Date Received: 12/ 1/20 Sample Identification: High Top Solar B Rec 2A Date Sampled: 11/30/20

Test Requested	Results			Method	Date Analyzed	Flags
Other Analysis	Analyzed	by TAI	a an	Sector Card and a	12/11/20	

Andy Schut Lab Manager/Yakima

Signature:

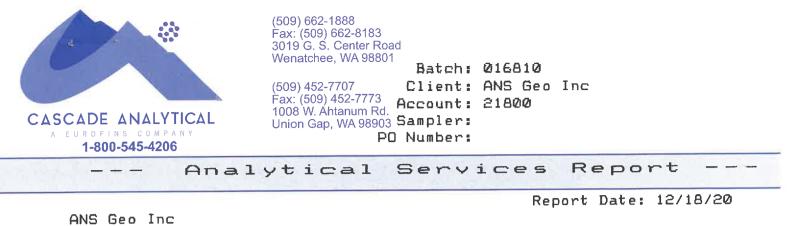
41

Approved By Name:

Function:

Eurofins-Cascade Analytical uses procedures established by EPA, AOAC, APHA, ASTM, and ANMA. Eurofins-Cascade Analytical makes no warranty of any kind. The client assumes all risk and liability from the use of these results. Results relate only to the items tested and the sample(s) as received by the laboratory. Eurofins-Cascade Analytical liability to the client as a result of use of the test results shall be limited to a sum equal to the fees paid by the client to Eurofins-Cascade Analytical for analysis. PLEASE REVIEW YOUR DATA IN A TIMELY MANNER. DATA GAPS OR ERRORS AFTER ONE MONTH WILL NOT BE OUR RESPONSIBILITY. THOUGH WE DO KEEP ALL ANALYTICAL DATA FOR SEVERAL YEARS, SAMPLES ARE DISPOSED OF AFTER SIX WEEKS.

Page: 1 of 1



ANS Geo Inc 4475 S Clinton Ave #225 South Plainfield, NJ 07080

Laboratory Number: 20-C025479 Date Received: 12/ 1/20 Sample Identification: High Top Solar B Rec 2B Date Sampled: 11/30/20

Test Requested	Results		Method	Date Analyzed	Flags
Other Analysis	Analyzed	by TAI		12/11/20	

Approved By Name:

Andy Schut Lab Manager/Yakima

Signature:

aft

Function:

Eurofins-Cascade Analytical uses procedures established by EPA, AOAC, APHA, ASTM, and AWWA. Eurofins-Cascade Analytical makes no warranty of any kind. The client assumes all risk and liability from the use of these results. Results relate only to the items tested and the sample(s) as received by the laboratory. Eurofins-Cascade Analytical liability to the client as a result of use of the test results shall be limited to a sum equal to the fees paid by the client to Eurofins-Cascade Analytical for analysis. PLEASE REVIEW YOUR DATA IN A TIMELY MANNER. DATA GAPS OR ERRORS AFTER ONE MONTH WILL NOT BE OUR RESPONSIBILITY. THOUGH WE DO KEEP ALL ANALYTICAL DATA FOR SEVERAL YEARS, SAMPLES ARE DISPOSED OF AFTER SIX WEEKS.

Page: 1 of 1



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

Laboratory Job ID: 580-99489-1 Client Project/Site: ANS Geo Inc

For: Cascade Analytical Inc 1008 W. Ahtanum Rd. Union Gap, Washington 98903

Attn: Andy Schut

..... LINKS

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Authorized for release by: 12/17/2020 4:57:03 PM

Pauline Matlock, Project Manager (253)922-2310 pauline.matlock@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary	33
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Receipt Checklists	35

Job ID: 580-99489-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-99489-1

Comments

No additional comments.

Receipt

The samples were received on 12/3/2020 3:47 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3° C.

Receipt Exceptions

The following samples were received outside of holding time for the stir bar vials to be frozen within 48 hous of sampling.: High Top Solar B-REC-2A (580-99489-1) and High Top Solar B-REC-2B (580-99489-2).

GC/MS VOA

Method 8260D: Surrogate recovery for the following samples were outside control limits: High Top Solar B-REC-2A (580-99489-1) and High Top Solar B-REC-2B (580-99489-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The following samples were received outside of holding time: High Top Solar B-REC-2A (580-99489-1) and High Top Solar B-REC-2B (580-99489-2).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-345397 and analytical batch 580-345537 recovered outside control limits for the following analytes: Dichlorodifluoromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-345537 recovered above the upper control limit for Bromomethane, Chloroethane, Dichlorodifluoromethane, 1,1-Dichloroethene, Chloromethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 580-345537/3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270E: The continuing calibration verification (CCV) associated with batch 580-344983 recovered above the upper control limit for Nitrobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: High Top Solar B-REC-2A (580-99489-1) and (CCVIS 580-344983/3).

Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-344983 was outside criteria for the following analyte(s): N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270E: The method blank for preparation batch 580-344832 contained Naphthalene above the reporting limit (RL) and Anthracene above the Method Detection Limit but below the Reporting Limit. None of the samples associated with this method blank contained the target compounds; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 8270E: The following analytes have been identified, in the reference method and/or via historical data, to be poor and/or erratic performers: 3,3'-dichlorobenzidine, 4-Nitrophenol, Hexachlorocyclopentadiene. These analytes may have a %D >50%.

Method 8270E: The following analytes have been identified, in the reference method and/or via historical data, to be poor and/or erratic performers: 2,4-Dinitrophenol, Hexachlorocyclopentadiene, Benzoic acid. These analytes may have a %D >60%.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 580-99489-1

Job ID: 580-99489-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method 6010D: The initial calibration blank (ICB) for analytical batch 580-345469 contained Cr above half the reporting limit (RL). All reported samples associated with this ICB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the ICB; therefore, re-analysis of samples was not performed.

The method blank for prep batch 345245 contained Cadmium above the method detection limit. This target analyte concentration was less than half th reporting limit (RL) in both the method blank and the associated samples; therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Ргер

Method 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: High Top Solar B-REC-2A (580-99489-1) and High Top Solar B-REC-2B (580-99489-2). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was under this range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Qualifiers

4

GC/MS VOA	
Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
В	Compound was found in the blank and sample.
н	Sample was prepped or analyzed beyond the specified holding time
H3	Sample was received and analyzed past holding time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
GC/MS Semi	VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals	
Qualifier	Qualifier Description
۸	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD recovery exceeds control limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control

Definitions/Glossary

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Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.								
RER	Relative Error Ratio (Radiochemistry)								
RL	Reporting Limit or Requested Limit (Radiochemistry)								
RPD	Relative Percent Difference, a measure of the relative difference between two points								
TEF	Toxicity Equivalent Factor (Dioxin)								
TEQ	Toxicity Equivalent Quotient (Dioxin)								
TNTC	Too Numerous To Count								

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

.

Lab Sample ID: 580-99489-1 Matrix: Solid Percent Solids: 89.0

Method: 8260D - Volatile Or Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND	H H3 *+	2.2	0.53	ug/Kg	<u>¢</u>	12/03/20 16:35	12/11/20 21:12	
Chloromethane	ND	H H3	5.4	1.0	ug/Kg	₽	12/03/20 16:35	12/11/20 21:12	
Vinyl chloride	ND	H H3	2.2	0.33	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Bromomethane	ND	H H3	1.1	0.23	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Chloroethane	ND	Н НЗ	11	0.82	ug/Kg	\$	12/03/20 16:35	12/11/20 21:12	
Trichlorofluoromethane	ND	Н НЗ	2.2	0.33	ug/Kg	₽	12/03/20 16:35	12/11/20 21:12	
1.1-Dichloroethene	ND	Н НЗ	5.4	1.2	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Methylene Chloride	ND	н НЗ	44	11	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
trans-1,2-Dichloroethene	ND	H H3	2.2		ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
1,1-Dichloroethane	ND	H H3	1.1		ug/Kg	×		12/11/20 21:12	
2,2-Dichloropropane	ND	H H3	5.4		ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
cis-1,2-Dichloroethene	ND	ННЗ	3.3		ug/Kg	\$		12/11/20 21:12	
Bromochloromethane	ND	Н НЗ	2.2	and the second second				12/11/20 21:12	
	ND	н нз	2.2	0.33	ug/Kg	¢		12/11/20 21:12	
Chloroform		H H3	2.2		ug/Kg			12/11/20 21:12	
1,1,1-Trichloroethane	ND	н нз Н НЗ	2.2		ug/Kg ug/Kg	¢.		12/11/20 21:12	
Carbon tetrachloride	ND							12/11/20 21:12	
1,1-Dichloropropene	ND	H H3	2.2		ug/Kg	Å		12/11/20 21:12	
Benzene	ND	H H3	2.2	126.000	ug/Kg			12/11/20 21:12	00000
1,2-Dichloroethane	ND	H H3	1.1		ug/Kg				
Trichloroethene	ND	H H3	2.2		ug/Kg	¢		12/11/20 21:12	
1,2-Dichloropropane	ND	H H3	2.2		ug/Kg	¢.		12/11/20 21:12	$\hat{\boldsymbol{x}} = \hat{\boldsymbol{x}} = \hat{\boldsymbol{x}} = \hat{\boldsymbol{x}} = \hat{\boldsymbol{x}}$
Dibromomethane	ND	H H3	1.1		ug/Kg			12/11/20 21:12	
Bromodichloromethane	ND	H H3	1.1	0.20	ug/Kg	¢		12/11/20 21:12	
cis-1,3-Dichloropropene	ND	H H3	1.1	0.22	ug/Kg	¢		12/11/20 21:12	
Toluene	1.9	J H H3	11		ug/Kg	\$		12/11/20 21:12	
trans-1,3-Dichloropropene	ND	H H3	11	0.65	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
1,1,2-Trichloroethane	ND	H H3	2.2	0.27	ug/Kg	¢		12/11/20 21:12	
Tetrachloroethene	ND	H H3	2.2	0.44	ug/Kg	¢		12/11/20 21:12	
1,3-Dichloropropane	ND	H H3	2.2	0.25	ug/Kg	\$	12/03/20 16:35	12/11/20 21:12	
Dibromochloromethane	ND	H H3	1.6	0.29	ug/Kg	\$	12/03/20 16:35	12/11/20 21:12	
1,2-Dibromoethane	ND	H H3	1.1	0.22	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Chlorobenzene	ND	Н НЗ	2.2	0.27	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Ethylbenzene	ND	Н НЗ	2.2	0.45	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
1,1,1,2-Tetrachloroethane	ND	H H3	3.3	0.64	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
1,1,2,2-Tetrachloroethane	ND	H H3	4.4	0.98	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
m-Xylene & p-Xylene	0.77	JHH3	11	0.61	ug/Kg	₩.	12/03/20 16:35	12/11/20 21:12	
o-Xylene	ND	Н НЗ	5.4	1.0	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Styrene	ND	Н НЗ	3.3		ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Bromoform	ND	н нз	5.4		ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Isopropylbenzene	ND	H H3	2.2		ug/Kg	¢		12/11/20 21:12	
	ND	н нз		1.1	ug/Kg	÷		12/11/20 21:12	
Bromobenzene N-Propylbenzene	ND	H H3	5.4		ug/Kg	¢		12/11/20 21:12	
a second for the second se	ND	H H3	5.4	1.1	ug/Kg	¢.	A REPORT OF A REPORT OF A	12/11/20 21:12	
1,2,3-Trichloropropane		H H3	5.4	1.0	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
2-Chlorotoluene								12/11/20 21:12	
1,3,5-Trimethylbenzene		H H3	5.4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ug/Kg	÷	12/03/20 16:35		245
4-Chlorotoluene		H H3	5.4			¢ ×			
t-Butylbenzene		H H3	3.3		ug/Kg	¢		12/11/20 21:12	
1,2,4-Trimethylbenzene	ND	H H3	5.4	1.3	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	

Client Sample ID: High Top Solar B-REC-2A Date Collected: 11/30/20 00:00 Date Received: 12/03/20 15:47

Lab Sample ID: 580-99489-1 Matrix: Solid Percent Solids: 89.0

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Method: 8260D - Volatile Or Analyte	Result	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fa
1,3-Dichlorobenzene	ND	H H3	5.4	1.2	ug/Kg	₿	12/03/20 16:35	12/11/20 21:12	
4-Isopropyltoluene	ND	H H3	2.2	0.44	ug/Kg	₽	12/03/20 16:35	12/11/20 21:12	
1,4-Dichlorobenzene	ND	H H3	5.4	1.1	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
n-Butylbenzene	ND	H H3	3.3	0.69	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
1,2-Dichlorobenzene	ND	H H3	11	1.4	ug/Kg	₽	12/03/20 16:35	12/11/20 21:12	
1,2-Dibromo-3-Chloropropane	ND	H H3	11	1.7	ug/Kg	₽	12/03/20 16:35	12/11/20 21:12	
1,2,4-Trichlorobenzene	ND	Н НЗ	2.2	0.46	ug/Kg	₿	12/03/20 16:35	12/11/20 21:12	
1,2,3-Trichlorobenzene	ND	H H3	3.3	0.65	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Hexachlorobutadiene	ND	H H3	3.3	0.65	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Naphthalene	8.7	JHH3B	11	2.0	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Methyl tert-butyl ether	ND	H H3	2.2	0.33	ug/Kg	¢	12/03/20 16:35	12/11/20 21:12	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
oluene-d8 (Surr)		S1+	80 - 120				12/03/20 16:35	12/11/20 21:12	
-Bromofluorobenzene (Surr)	68	S1-	80 - 120				12/03/20 16:35	12/11/20 21:12	
Dibromofluoromethane (Surr)	71	S1-	80 - 120				12/03/20 16:35	12/11/20 21:12	
,2-Dichloroethane-d4 (Surr)	45	S1-	80-121				12/03/20 16:35	12/11/20 21:12	
Method: 8270E - Semivolati	ile Organic Co	mpounds	(GC/MS)						
analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
,2,4-Trichlorobenzene	ND		55	6.6	ug/Kg		12/04/20 15:42	12/08/20 16:34	
,2-Dichlorobenzene	ND		55	5.5	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
,3-Dichlorobenzene	ND		55	5.3	ug/Kg	₩. ₩	12/04/20 15:42	12/08/20 16:34	
,4-Dichlorobenzene	ND		55	9.1	ug/Kg	¢	12/04/20 15:42		
-Methylnaphthalene	ND		33	5,5	ug/Kg	¢	12/04/20 15:42		
4,5-Trichlorophenol	ND	F2	220	8.9	ug/Kg	à	12/04/20 15:42		
4,6-Trichlorophenol	ND	i a a a ta Mitta di	160		ug/Kg	Ť ¢	12/04/20 15:42		
4-Dichlorophenol	ND	12	220		ug/Kg	¢	12/04/20 15:42		
2,4-Dimethylphenol	ND		220		ug/Kg	æ	12/04/20 15:42		
	ND	F1	2200		ug/Kg	~. ¢	12/04/20 15:42		
2,4-Dinitrophenol		F1 F2	2200	47			12/04/20 15:42		
1,4-Dinitrotoluene	ND		160		ug/Kg	¢ ×	12/04/20 15:42	12/08/20 16:34	
2,6-Dinitrotoluene	ND	ΓZ			ug/Kg	\$ 	12/04/20 15:42	and a second second second second	
-Chloronaphthalene	ND		27		ug/Kg	\$ \$			
-Chlorophenol	ND		220		ug/Kg	¢ 	12/04/20 15:42	12/08/20 16:34	
-Methylnaphthalene	ND		55	1.000	ug/Kg	نٿن ان	12/04/20 15:42		
-Methylphenol	ND		160		ug/Kg	¢	12/04/20 15:42		
-Nitroaniline	ND		110		ug/Kg	\$	12/04/20 15:42		
-Nitrophenol	ND		220		ug/Kg	¢	12/04/20 15:42		
& 4 Methylphenol	ND		220		ug/Kg	¢	12/04/20 15:42		
,3'-Dichlorobenzidine		F2 F1	440		ug/Kg	¢	12/04/20 15:42		
-Nitroaniline	ND		330		ug/Kg	₽	12/04/20 15:42		
,6-Dinitro-2-methylphenol	ND	F2	1100			₽	12/04/20 15:42		
-Bromophenyl phenyl ether	ND		220	10	ug/Kg	₽	12/04/20 15:42		
-Chloro-3-methylphenol	ND	F2	160		ug/Kg		12/04/20 15:42		
-Chloroaniline	ND		1600		ug/Kg	₿	12/04/20 15:42	12/08/20 16:34	
-Chlorophenyl phenyl ethe r	ND		220		ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Nitroaniline	ND		160	55	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
l-Nitrophenol	ND	F2	2200	190	ug/Kg	₽	12/04/20 15:42	12/08/20 16:34	
Acenaphthene	ND		44	5.0	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Acenaphthylene	ND		27	5.5	ug/Kg	æ	12/04/20 15:42	12/08/20 16:34	

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Client Sample ID: High Top Solar B-REC-2A Date Collected: 11/30/20 00:00 Date Received: 12/03/20 15:47

Job ID: 580-99489-1

Lab Sample ID: 580-99489-1

Matrix: Solid Percent Solids: 89.0

Method: 8270E - Semivolati Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		66	18	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Benzo[a]anthracene	ND		44	12	ug/Kg	☆	12/04/20 15:42	12/08/20 16:34	
Benzo[a]pyrene	ND		66	14	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Benzo[b]fluoranthene	ND		44	11	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Benzo[g,h,i]perylene	ND		66	20	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	·
Benzo[k]fluoranthene	ND		66	15	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Benzoic acid	ND	F1	4400	1300	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Benzyl alcohol	ND		1100	55	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Bis(2-chloroethoxy)methane	ND		220	20	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Bis(2-chloroethyl)ether	ND		110	8.4	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Bis(2-ethylhexyl) phthalate	240	J	660		ug/Kg	Ø	12/04/20 15:42	12/08/20 16:34	
bis(chloroisopropyl) ether	ND	-	220	6.7	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Butyl benzyl phthalate	ND		220	The second second	ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Carbazole	ND		160	8.0	ug/Kg	¢	12/04/20 15:42		-
Chrysene	ND		66		ug/Kg	¢	12/04/20 15:42		
Dibenz(a,h)anthracene	ND		55		ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Dibenzofuran	ND		160		ug/Kg	¢		12/08/20 16:34	
Diethyl phthalate	ND		440		ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Dimethyl phthalate	ND	Personal States and	160		ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Di-n-butyl phthalate	ND		550		ug/Kg	¢		12/08/20 16:34	
Di-n-octyl phthalate	ND		160		ug/Kg	¢	12/04/20 15:42	12/08/20 16:34	
Fluoranthene	ND		44		ug/Kg		12/04/20 15:42		
Fluorene	ND	F2	27		ug/Kg	æ		12/08/20 16:34	
Hexachlorobenzene	ND	12	55		ug/Kg	æ		12/08/20 16:34	
Hexachlorobutadiene	ND		55		ug/Kg	×	12/04/20 15:42		
Hexachlorocyclopentadiene	ND	F1	110		ug/Kg	¢		12/08/20 16:34	
Hexachloroethane	ND		160	4.7	ug/Kg	×		12/08/20 16:34	
	ND		44	Design and the second	ug/Kg	¢		12/08/20 16:34	
Indeno[1,2,3-cd]pyrene	ND		160		ug/Kg	æ	12/04/20 15:42		
Isophorone	ND		27		ug/Kg	æ	12/04/20 15:42		
Naphthalene	ND		220		ug/Kg	¢	12/04/20 15:42		
Nitrobenzene	ND		220		ug/Kg	æ	12/04/20 15:42		
N-Nitrosodi-n-propylamine	ND		66		ug/Kg	æ	12/04/20 15:42		
N-Nitrosodiphenylamine	ND	52	440		ug/Kg	¢.	12/04/20 15:42	and the second sec	
Pentachlorophenol	ND	FZ	66		ug/Kg	æ	12/04/20 15:42		
Phenanthrene			160		ug/Kg	¢	12/04/20 15:42		
Phenol	ND	Constant and Constant		1.000.000.000			12/04/20 15:42		
Pyrene	ND		66	14	ug/Kg	ንፈና	1207120 10.42	12/00/20 10:04	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
2-Fluorophenol (Surr)	82		47 - 119				12/04/20 15:42	12/08/20 16:34	
Phenol-d5 (Surr)	75		59 - 120				12/04/20 15:42	12/08/20 16:34	
Nitrobenzene-d5 (Surr)	79		54 - 120					12/08/20 16:34	100 (14, 15) (
2-Fluorobiphenyl	86	00000 + DCD22	57 - 120		2 · · · · · · · · · · · · · · · · · · ·		12/04/20 15:42	12/08/20 16:34	
2,4,6-Tribromophenol (Surr)	85		52 - 115					12/08/20 16:34	
Terphenyl-d14 (Surr)	95		73 - 125				12/04/20 15:42	12/08/20 16:34	
	50								
Method: NWTPH-Gx - North	west - Volatile	Petroleur	n Products (GC)					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		12	5.5	mg/Kg	æ	12/07/20 16:09	12/08/20 09:30	

Client Sample ID: High Top Solar B-REC-2A Date Collected: 11/30/20 00:00 Date Received: 12/03/20 15:47							Lab Sample ID: 580-99 Matri Percent Solie					
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	92		50 - 150				12/07/20 16:09	12/08/20 09:30	1			
Method: NWTPH-Dx - Norf	thwest - Semi-V	olatile Pet	roleum Prod	ucts (G(2)							
Analyte		Qualifier	RL	MDL	-	D	Prepared	Analyzed	Dil Fac			
#2 Diesel (C10-C24)	26	J	52	13	mg/Kg	\$	12/04/20 13:02	12/07/20 21:03	1			
Motor Oil (>C24-C36)	220		52	18	mg/Kg	¢	12/04/20 13:02	12/07/20 21:03	1			
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa			
o-Terphenyl	77		50 - 150				12/04/20 13:02	12/07/20 21:03	1			
Method: 6010D - Metals (IC	~D \											
Analyte	· ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Arsenic	4.7		2.8	0.23	mg/Kg	¢	12/10/20 11:47	12/11/20 17:08	-			
Cadmium	ND		0.93	0.046	mg/Kg	¢	12/10/20 11:47	12/11/20 17:08				
Chromium	12	٨	1.2	0.20	mg/Kg	¢	12/10/20 11:47	12/11/20 17:08				
Lead	11		1.4	0.21	mg/Kg	¢	12/10/20 11:47	12/11/20 17:08	1			
Method: 7471A - Mercury (
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Mercury	0.0071	J F1	0.021	0.0062	mg/Kg	¢.	12/11/20 12:16	12/11/20 17:15	1			
General Chemistry												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Percent Solids	89.0	3	0.1	0.1	%			12/07/20 14:48				
								12/07/20 14:48				

12/17/2020

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Lab Sample ID: 580-99489-2 Matrix: Solid Percent Solids: 88.8

Method: 8260D - Volatile C Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND	H H3 *+	2.3	0.57	ug/Kg	¢	12/03/20 16:35		
Chloromethane	ND	Н НЗ	5.8	1.1	ug/Kg	\$	12/03/20 16:35	12/11/20 21:38	
Vinyl chloride	ND	Н НЗ	2.3	0.35	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
Bromomethane	ND	H H3	1.2	0.24	ug/Kg	ø	12/03/20 16:35	12/11/20 21:38	
Chloroethane	ND	Н НЗ	12	0.87	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
Trichlorofluoromethane	ND	ННЗ	2.3	0.35	ug/Kg	☆	12/03/20 16:35	12/11/20 21:38	
1.1-Dichloroethene	ND	H H3	5.8	1.3	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
Methylene Chloride	14	ЈНН3	46	11	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
trans-1,2-Dichloroethene	ND	ННЗ	2.3	0.46	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
1.1-Dichloroethane	ND	Н НЗ	1.2	0.22	ug/Kg	×	12/03/20 16:35	12/11/20 21:38	
2,2-Dichloropropane		н нз	5.8		ug/Kg	☆	12/03/20 16:35	12/11/20 21:38	
cis-1,2-Dichloroethene		H H 3	3.5		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
Bromochloromethane		H H3	2.3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ug/Kg	÷ • • • •	12/03/20 16:35	12/11/20 21:38	
Chloroform		H H3	2.3		ug/Kg	×	12/03/20 16:35		
	ND	ННЗ	2.3		ug/Kg	ä	12/03/20 16:35		
1,1,1-Trichloroethane Carbon tetrachlonde	ND	H H3	2.3		ug/Kg	æ	12/03/20 16:35		
	ND	H H3	2.3		ug/Kg	ă.	12/03/20 16:35		
1,1-Dichloropropene	ND	H H3	2.3		ug/Kg	Å.	12/03/20 16:35		
Benzene	and the second second second	п пз Н Н З	2.3 1.2	1999	ug/Kg		12/03/20 16:35		
1,2-Dichloroethane					ug/Kg	¢	12/03/20 16:35		
Trichloroethene		H H3	2.3 2.3		÷ -	÷ ¢	12/03/20 16:35		
1,2-Dichloropropane		H H3			ug/Kg	122	12/03/20 16:35		
Dibromomethane		HH3	1.2		ug/Kg	¢.	12/03/20 16:35		
Bromodichloromethane		H H3	1.2	0.21	ug/Kg	¢	12/03/20 16:35		
cis-1,3-Dichloropropene		HH3	1.2		ug/Kg	\$		and the second	
Toluene	6.5	J H H3	12		ug/Kg	*	12/03/20 16:35		
trans-1,3-Dichloropropene	ND	H H3	12	0.69	ug/Kg	*	12/03/20 16:35		
1,1,2-Trichloroethane	ND	Н НЗ	2.3		ug/Kg	. ×	12/03/20 16:35		
Tetrachloroethene	ND	Н НЗ	2.3		ug/Kg	₽	12/03/20 16:35		
1,3-Dichloropropane	ND	Н НЗ	2.3		ug/Kg	¢	12/03/20 16:35		
Dibromochlorometh a ne	ND	Н НЗ	1.7		ug/Kg	☆	12/03/20 16:35	the second se	
1,2-Dibromoethane	ND	H H3	1.2	0.23	ug/Kg	¢	12/03/20 16:35		
Chlorobenzene	ND	Н НЗ	2.3	0.29	ug/Kg	¢	12/03/20 16:35		
Ethylbenzene	ND	Н НЗ	2.3	0.47	ug/Kg	₽	12/03/20 16:35		
1,1,1,2-Tetrachloroethane	ND	Н НЗ	3.5	0.68	ug/Kg	☆	12/03/20 16:35	12/11/20 21:38	
1.1.2.2-Tetrachloroethane	ND	Н НЗ	4.6	1.0	ug/Kg	₽	12/03/20 16:35	12/11/20 21:38	
m-Xvlene & p-Xvlene	1.8	J H H3	12	0.65	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
o-Xylene	ND	Н НЗ	5.8	1.1	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
Styrene		Н НЗ	3.5		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
Bromoform		H H3	5.8		ug/Kg	¢	12/03/20 16:35		
Isopropylbenzene		н НЗ	2.3		ug/Kg	☆	12/03/20 16:35		
Bromobenzene		H H3	12		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
N-Propylbenzene		ннз	5.8		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
the set of the second		н нз	5.8		ug/Kg	×	12/03/20 16:35	12/11/20 21:38	
1,2,3-Trichloropropan e 2-Chlorotoluene		H H3	5.8		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
		H H3	5.8		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
1,3,5-Trimethylbenzene	A REAL PROPERTY AND A REAL		5.8		ug/Kg		12/03/20 16:35	12/11/20 21:38	
4-Chlorotoluene		H H3			ug/Kg ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
t-Butylbenzene		H H3	3.5				12/03/20 16:35	12/11/20 21:38	
1,2,4-Trimethylbenzene	ND	H H3	5.8	1.4	ug/Kg	¢	12/03/20 10.35	121112021.00	

Client Sample ID: High Top Solar B-REC-2B Date Collected: 11/30/20 00:00 Date Received: 12/03/20 15:47

Lab Sample ID: 580-99489-2 Matrix: Solid

Percent Solids: 88.8

nalyte		Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	DilF
,3-Dichlorobenzene	ND	H H3	5.8		ug/Kg	₽	12/03/20 16:35	12/11/20 21:38	
-Isopropyltoluene	ND	H H3	2.3	0.46	ug/Kg		12/03/20 16:35	12/11/20 21:38	
,4-Dichlorobenzene	ND	H H3	5.8	1.1	ug/Kg	\$	12/03/20 16:35	12/11/20 21:38	
-Butylbenzene	ND	H H3	3.5	0.73	ug/Kg	\$	12/03/20 16:35	12/11/20 21:38	
,2-Dichlorobenzene	ND	H H3	12		ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
2-Dibromo-3-Chloropropane	ND	H H3	12	1.9	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
,2,4-Trichlorobenzene	ND	H H3	2.3	0.49	ug/Kg	\$	12/03/20 16:35	12/11/20 21:38	
2,3-Trichlorobenzene	ND	H H3	3.5	0.69	ug/Kg	\$	12/03/20 16:35	12/11/20 21:38	
exachlorobutadiene	ND	H H3	3.5	0.69	ug/Kg	\$	12/03/20 16:35	12/11/20 21:38	
laphthalene	13	H H3 B	12	2.1	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
lethyl tert-butyl ether	ND	H H3	2.3	0.35	ug/Kg	¢	12/03/20 16:35	12/11/20 21:38	
urrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil I
oluene-d8 (Surr)	156	S1+	80 - 120				12/03/20 16:35	12/11/20 21:38	
Bromofluorobenzene (Surr)	71	S1-	80 - 120				12/03/20 16:35	12/11/20 21:38	
ibromofluoromethane (Surr)	78	S1-	80 - 120				12/03/20 16:35	12/11/20 21:38	
,2-Dichloroethane-d4 (Surr)	46	S1-	80 - 121				12/03/20 16:35	12/11/20 21:38	
lethod: 8270E - Semivolati	le Organic Co	mpounds	(GC/MS)						
nalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
2,4-Trichlorobenzene	ND		52	6.2	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
2-Dichlorobenzene	ND		52	5.2	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
3-Dichlorobenzene	ND		52	5.0	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4-Dichlorobenzene	ND		52	8.6	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Methylnaphthalene	ND		31	5.2	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4,5-Trichlorophenol	ND		210	8.4	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4,6-Trichlorophenol	ND	· · · · · · · · · · · · · · · · · · ·	160	14	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4-Dichlorophenol	ND		210	62	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4-Dimethylphenol	ND		210		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4-Dinitrophenol	ND		2100	610	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
4-Dinitrotoluene	ND		210		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
6-Dinitrotoluene	ND		160		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Chloronaphthalene	ND		26		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
-Chlorophenol	ND		210		ug/Kg	æ		12/08/20 17:43	
-Methylnaphthalene	ND		52		ug/Kg	æ	12/04/20 15:42	12/08/20 17:43	
-Methylphenol	ND		160		ug/Kg		12/04/20 15:42		
Nitroaniline	ND		100		ug/Kg	ŭ		12/08/20 17:43	
-Nitrophenol	ND		210		ug/Kg	æ		12/08/20 17:43	
& 4 Methylphenol	ND		210		ug/Kg	¢		12/08/20 17:43	
,3'-Dichlorobenzidine	ND		420		ug/Kg	¢		12/08/20 17:43	
-Nitroaniline	ND		310		ug/Kg	¢		12/08/20 17:43	
,6-Dinitro-2-methylphenol	ND		1000		ug/Kg	¢		12/08/20 17:43	
• •	ND		210		ug/Kg	¢.		12/08/20 17:43	
Bromophenyl phenyl ether	ND		160		ug/Kg ug/Kg	¢		12/08/20 17:43	
Chloro-3-methylphenol								12/08/20 17:43	all inte
Chloroaniline	ND		1600		ug/Kg	¢		12/08/20 17:43	
-Chlorophenyl phenyl ether	ND		210		ug/Kg	¢ ×			
-Nitroaniline	ND		160		ug/Kg	¢		12/08/20 17:43	
-Nitrophenol	ND		2100		ug/Kg	\$		12/08/20 17:43	
cenaphthene	ND		42	4.8	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Client Sample ID: High Top Solar B-REC-2B Date Collected: 11/30/20 00:00 Date Received: 12/03/20 15:47

Job ID: 580-99489-1

Lab Sample ID: 580-99489-2 Matrix: Solid Percent Solids: 88.8

Method: 8270E - Semivola Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil F
Anthracene	ND		62	17	ug/Kg		12/04/20 15:42	12/08/20 17:43	
Benzo[a]anthracene	ND		42	11	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Benzo[a]pyrene	ND		62	14	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Benzo[b]fluoranthene	ND		42	10	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Benzo[g,h,i]perylene	ND		62	19	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Benzo[k]fluoranthene	ND		62		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Benzoic acid	ND		4200		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Benzyl alcohol	ND		1000		ug/Kg	æ	12/04/20 15:42	12/08/20 17:43	
Bis(2-chloroethoxy)methane	ND		210		ug/Kg	¢		12/08/20 17:43	
	ND	- 0000 Cit) •	100	and the second second	ug/Kg	¢.		12/08/20 17:43	
Bis(2-chloroethyl)ether	ND		620	74	ug/Kg	æ		12/08/20 17:43	
Bis(2-ethylhexyl) phthalate	ND		210		ug/Kg	×		12/08/20 17:43	
bis(chloroisopropyl) ether	ND		210	Contraction of the second	ug/Kg	ç		12/08/20 17:43	97. ¹⁹ 1
Butyl benzyl phthalate				7.6	ug/Kg ug/Kg	æ		12/08/20 17:43	
Carbazole	ND		160					12/08/20 17:43	
Chrysene	ND		62	14	ug/Kg	¢ ×		12/08/20 17:43	
Dibenz(a,h)anthracene	ND		52		ug/Kg	¢ ~		12/08/20 17:43	
Dibenzofuran	ND		160	6.1	ug/Kg	¢-			
Diethyl phthalate	ND	es	420		ug/Kg	n Do- <u>S</u> o		12/08/20 17:43	
Dimethyl phthalate	ND		160		ug/Kg	¢		12/08/20 17:43	
Di-n-butyl phthalate	ND		520		ug/Kg	⇔		12/08/20 17:43	
Di-n-octyl phthalate	27	J	160		ug/Kg	*		12/08/20 17:43	
Fluoranthene	ND		42		ug/Kg	¢		12/08/20 17:43	
Fluorene	ND		26	5.2	ug/Kg	¢		12/08/20 17:43	
-lexachlorobenzene	ND		52	16	ug/Kg	¢		12/08/20 17:43	
Hexachlorobutadiene	ND		52	16	ug/Kg	¢		12/08/20 17:43	
-lexachlorocyclopentadiene	ND		100	8.0	ug/Kg	¢		12/08/20 17:43	
lexachloroethane	ND		160	4.5	ug/Kg	¢		12/08/20 17:43	1722
ndeno[1,2,3-cd]pyrene	ND		42	12	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
sophorone	ND		160	8.7	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Naphthalene	ND		26	5.2	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Nitrobenzene	ND		210	21	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
N-Nitrosodi-n-propylamine	ND		210	23	ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
N-Nitrosodiphenylamine	ND		62		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Pentachlorophenol	ND		420		ug/Kg	¢	12/04/20 15:42	12/08/20 17:43	
Phenanthrene	ND		62		ug/Kg	¢		12/08/20 17:43	
Phenol	ND		160		ug/Kg	æ		12/08/20 17:43	
Pyrene	ND	ala al Contribution a su	62		ug/Kg			12/08/20 17:43	
		- ··-					Dronored	Analimad	Dil I
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed 12/08/20 17:43	
2-Fluorophenol (Surr)	84		47 - 119						
Phenol-d5 (Surr)	67		59 - 120					12/08/20 17:43	
Nitrobenzene-d5 (Surr)	77		54 - 120					12/08/20 17:43	intises i
2-Fluorobiphenyl	86		57 - 120					12/08/20 17:43	
2,4,6-Tribromophenol (Surr)	79		52 <u>-</u> 1 15					12/08/20 17:43	
Terphenyl-d14 (Surr)	93		73 - 125				12/04/20 15:42	12/08/20 17:43	
Method: NWTPH-Gx - Nort	hwest - Volatile	Petroleur	n Products ((GC)					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Gasoline	ND		12	FC	mg/Kg	¢	12/07/20 16:09	12/08/20 09:54	

Client Sample ID: High Date Collected: 11/30/20 00: Date Received: 12/03/20 15:						Lab Sample ID: 580-99489- Matrix: Soli Percent Solids: 88.					
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	89		50 - 150				12/07/20 16:09	12/08/20 09:54	1		
– Method: NWTPH-Dx - Nort	hwest - Semi-V	olatile Pet	roleum Prod	lucts (GC	2)						
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac		
#2 Diesel (C10-C24)	ND		53	13	mg/Kg	₽	12/04/20 13:02	12/07/20 21:23	1		
Motor Oil (>C24-C36)	100		53	19	mg/Kg	¢	12/04/20 13:02	12/07/20 21:23	1		
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac		
o-Terphenyl	90		50 - 150				12/04/20 13:02	12/07/20 21:23	1		
Method: 6010D - Metals (IC Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Arsenic	4.8		2.4	0.20	mg/Kg	¢	12/10/20 11:47	12/11/20 17:11	1		
Cadmium	0.25	J	0.81	0.040	mg/Kg	☆	12/10/20 11:47	12/11/20 17:11	1		
Chromium	14	•	1.1	0.18	mg/Kg	☆	12/10/20 11:47	12/11/20 17:11	1		
Lead	10		1.2	0.18	mg/Kg	¢	12/10/20 11:47	12/11/20 17:11	1		
Method: 7471A - Mercury (CVAA)										
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Mercury	0.021	J	0.024	0.0071	mg/Kg	\$	12/11/20 12:16	12/11/20 17:24	1		
General Chemistry											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Percent Solids	88.8		0.1	0.1	%			12/07/20 14:48	1		
Percent Moisture	11.2		0.1	0.1	%			12/07/20 14:48	1		

12/17/2020

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-34539	9//1-A					Client Sample ID: Method Blank Prep Type: Total/NA			
Matrix: Solid Analysis Batch: 345537							Prep Batch:		
Analysis Daton. 040007	MB MB						•		
Analyte	Result Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa	
Dichlorodifluoromethane	ND	2.0	0.49	ug/Kg		12/11/20 16:40			
Chloromethane	ND	5.0	0.93	ug/Kg			12/11/20 20:46		
Vinyl chloride	ND	2.0	0.30	ug/Kg			12/11/20 20:46		
Bromomethane	ND	1.0	0.21	ug/Kg			12/11/20 20:46		
Chloroethane	ND	10	0.75	ug/Kg			12/11/20 20:46		
Trichlorofluoromethane	ND	2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46		
1,1-Dichloroethene	ND	5.0	1.1	ug/Kg		12/11/20 16:40	12/11/20 20:46		
Methylene Chloride	ND	40	9.9	ug/Kg		12/11/20 16:40	12/11/20 20:46		
trans-1,2-Dichloroethene	ND	2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
1,1-Dichloroethane	ND	1.0	0,19	ug/Kg	·	12/11/20 16:40	12/11/20 20:46		
2,2-Dichloropropane	ND	5.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
cis-1.2-Dichloroethene	ND	3.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
Bromochloromethane	ND	2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
Chloroform	ND	2.0		ug/Kg			12/11/20 20:46		
	ND	2.0		ug/Kg			12/11/20 20:46		
1,1,1-Trichloroethane	ND	2.0		ug/Kg			12/11/20 20:46		
Carbon tetrachloride	ND	2.0		ug/Kg		12/11/20 16:40			
1,1-Dichloropropene	ND	2.0		ug/Kg			12/11/20 20:46		
	CONTRACTOR AND A CONTRACTOR OF THE CONTRACTOR OF TO CONTRACTOR OF THE CONTRACTOR OF	1.0		ug/Kg	10.05		12/11/20 20:46		
1,2-Dichloroethane	ND ND	2.0		ug/Kg			12/11/20 20:46		
Trichloroethene		2.0		ug/Kg ug/Kg			12/11/20 20:46		
1,2-Dichloropropane	ND	and the second		a state of a post of	\$33113		12/11/20 20:46		
Dibromomethane	ND	1.0		ug/Kg			12/11/20 20:46		
Bromodichloromethane	ND	1.0		ug/Kg			12/11/20 20:46		
cis-1,3-Dichloropropene	ND	1.0		ug/Kg					
Toluene	ND	10		ug/Kg		12/11/20 16:40			
trans-1,3-Dichloropropene	ND	10		ug/Kg		12/11/20 16:40			
1,1,2-Trichloroethane	ND	2.0		ug/Kg			12/11/20 20:46		
Tetrachloroethene	ND	2.0		ug/Kg			12/11/20 20:46		
1,3-Dichloropropane	ND	2.0		ug/Kg		12/11/20 16:40			
Dibromochloromethane	ND	1.5		ug/Kg			12/11/20 20:46		
1,2-Dibromoethane	ND	1.0		ug/Kg			12/11/20 20:46		
Chlorobenzene	ND	2.0		0 0			12/11/20 20:46		
Ethylbenzene	ND	2.0	0.41	ug/Kg			12/11/20 20:46		
1,1,1,2-Tetrachloroethane	ND	3.0		ug/Kg			12/11/20 20:46		
1,1,2,2-Tetrachloroethane	ND	4.0		ug/Kg		12/11/20 16:40			
m-Xylene & p-Xylene	ND	10		ug/Kg			12/11/20 20:46		
o-Xylene	ND	5.0	0.92	ug/Kg		12/11/20 16:40	12/11/20 20:46		
Styrene	ND	3.0	0.74	ug/Kg		12/11/20 16:40	12/11/20 20:46		
Bromoform	ND	5.0	0.84	ug/Kg		12/11/20 16:40	12/11/20 20:46		
Isopropylbenzene	ND	2.0	0.46	ug/Kg		12/11/20 16:40	12/11/20 20:46		
Bromobenzene	ND	10	1.0	ug/Kg		12/11/20 16:40	12/11/20 20:46		
N-Propylbenzene	ND	5.0	0.76	ug/Kg		12/11/20 16:40	12/11/20 20:46		
1,2,3-Trichloropropane	ND	5.0	1.0	ug/Kg		12/11/20 16:40	12/11/20 20:46		
2-Chlorotoluene	ND	5.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
1,3,5-Trimethylbenzene	ND	5.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
4-Chlorotoluene	ND	5.0	and the second sec	ug/Kg	110 1		12/11/20 20:46		
t-Butylbenzene	ND	3.0		ug/Kg		12/11/20 16:40	12/11/20 20:46		
1,2,4-Trimethylbenzene	ND	5.0		ug/Kg		12/11/20 16:40			

Prep Type: Total/NA

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-345 Matrix: Solid Analysis Batch: 345537	397/1-A							le ID: Method Prep Type: To Prep Batch:	otal/NA
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		3.0	0.67	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,3-Dichlorobenzene	ND		5.0	1.1	ug/Kg	· 1000 V	12/11/20 16:40	12/11/20 20:46	1
4-lsopropyltoluene	ND		2.0	0.40	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,4-Dichlorobenzene	ND		5.0	0.98	ug/Kg	0010100	12/11/20 16:40	12/11/20 20:46	1
n-Butylbenzene	ND		3.0	0.63	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2-Dichlorobenzene	ND		10	1.3	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2,4-Trichlorobenzene	ND		2.0	0.42	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		12/11/20 16:40	12/11/20 20:46	· 1
Naphthalene	1.85	J	10	1.8	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
Methyl tert-butyl ether	ND		2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
To/uene-d8 (Surr)	88	7	80 - 120				12/11/20 16:40	12/11/20 20:46	1
4-Bromofluorobenzene (Surr)	96		80 - 120				12/11/20 16:40	12/11/20 20:46	1
Dibromofluoromethane (Surr)	103		80 - 120				12/11/20 16:40	12/11/20 20:46	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 121				12/11/20 16:40	12/11/20 20:46	1

Lab Sample ID: LCS 580-345397/2-A Matrix: Solid Analysis Batch: 345537

Prep Batch: 345397 Spike LCS LCS %Rec. Added **Result Qualifier** D %Rec Limits Analyte Unit ug/Kg Dichlorodifluoromethane 20.0 35.0 *+ 175 24 - 150 20.0 139 52 - 150 27.8 Chloromethane ug/Kg Vinyl chloride 20.0 24.3 ug/Kg 122 54 - 150 ug/Kg 20.0 26.6 133 42 - 150 Bromomethane Chloroethane 20.0 24.0 ug/Kg 120 50 - 150 Trichlorofluoromethane 20.0 22.8 ug/Kg 114 71-150 20.0 25.4 127 73 - 143 1,1-Dichloroethene ug/Kg 20.0 22.9 J 114 66 - 140 Methylene Chloride ug/Kg 108 77 - 134 20.0 trans-1,2-Dichloroethene 21.6 ug/Kg 1,1-Dichloroethane 20.0 21.9 ug/Kg 110 78-135 20.0 22.0 110 62 - 150 ug/Kg 2,2-Dichloropropane 111 68 - 132 cis-1,2-Dichloroethene 20.0 22.2 ug/Kg 115 76-131 Bromochloromethane 20.0 23.0 ug/Kg 20.0 20.7 103 74 - 133 Chloroform ug/Kg 1,1,1-Trichloroethane 20.0 106 78-144 21.3 ug/Kg 20.0 22.4 ug/Kg 112 66 - 150 Carbon tetrachloride 20.0 20.9 104 76 - 140 1,1-Dichloropropene ug/Kg 20.0 109 79 - 135 21.8 ug/Kg Benzene 1,2-Dichloroethane 20.0 22.4 ug/Kg 112 76-132 20.0 21.7 109 80 - 134 Trichloroethene ug/Kg 1,2-Dichloropropane 20.0 22.0 ug/Kg 110 65 - 136 20.0 23.5 ug/Kg 118 72-130 Dibromomethane 102 73 - 125 20.0 20.3 Bromodichloromethane ug/Kg cis-1,3-Dichloropropene 20.0 18.5 ug/Kg **g**3 80 - 122

QC Sample Results

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345537	345397/2- A			S 1 CS	Clie	nt San	nple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 345397
Analyte		Spike Added		LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene		20.0	18.2		ug/Kg		91	75 - 137
trans-1,3-Dichloropropene	- Constraint (Constraint) (Constraint)	20.0	18.3		ug/Kg		91	80 - 121
1,1,2-Trichloroethane		20.0	20.1		ug/Kg		101	80 - 123
Tetrachloroethene		20.0	17.3		ug/Kg	10001000	87	58 - 150
1,3-Dichloropropane		20.0	19.3		ug/Kg		96	75 - 120
Dibromochloromethane		20.0	18,8		ug/Kg		94	75 - 132
1.2-Dibromoethane		20.0	20.6		ug/Kg		103	77 - 123
Chlorobenzene		20.0	18.3		ug/Kg		91	80 - 131
Ethylbenzene		20.0	19.6		ug/Kg		98	80 - 135
1,1,1,2-Tetrachloroethane		20.0	18.4		ug/Kg		92	79 - 128
1,1,2,2-Tetrachloroethane		20.0	19.3		ug/Kg		97	77 - 127
m-Xylene & p-Xylene		20.0	17.1		ug/Kg		86	80 - 132
o-Xylene		20.0	19.1		ug/Kg		95	80 - 132
Styrene		20.0	18.4		ug/Kg		92	79 - 129
Bromoform		20.0	19.0		ug/Kg		95	71 - 146
Isopropylbenzene	· · · · · · · · · · · · · · · · · · ·	20.0	18.9		ug/Kg		94	81 - 140
Bromobenzene		20.0	19.2		ug/Kg		96	78 - 126
N-Propylbenzene		20.0	17.8		ug/Kg		89	68 - 149
1,2,3-Trichloropropane		20.0	19,7		ug/Kg		98	77 - 127
2-Chlorotoluene		20.0	16.6		ug/Kg		83	77 - 134
1,3,5-Trimethylbenzene		20.0	17.8		ug/Kg		89	72 - 142
4-Chlorotoluene	111000000000000000000000000000000000000	20.0	16.8	V	ug/Kg		84	71 - 137
t-Butylbenzene		20.0	17.4		ug/Kg		87	72 - 144
1,2,4-Trimethylbenzene		20.0	17.8		ug/Kg		89	73 - 138
sec-Butylbenzene	000000000000000000000000000000000000000	20.0	18.0	5.5.7.7.	ug/Kg		90	71 - 143
1,3-Dichlorobenzene		20.0	18.3		ug/Kg		91	78 - 132
		20.0	17.8		ug/Kg		89	71 - 142
4-Isopropyltoluene 1,4-Dichlorobenzene		20.0	18.4		ug/Kg		92	77 - 123
•		20.0	16.8		ug/Kg		84	69 - 143
n-Butylbenzene		20.0	18.5		ug/Kg		93	78 - 126
1,2-Dichlorobenzene	STATUS - 497 A. 717 - 17171 116-	20.0	20.1	$ (a_i(a_i),a_i(a_i)) = 1 + 1$	ug/Kg		100	75 - 129
1,2-Dibromo-3-Chloropropane		20.0	20.1		ug/Kg		100	74 - 131
1,2,4-Trichlorobenzene		20.0	19.5		ug/Kg ug/Kg		97	68 - 136
1,2,3-Trichlorobenzene		20.0	18.6	1921335-33	ug/Kg		93	65 - 150
Hexachlorobutadiene		20.0	21.5		ug/Kg		107	64 - 136
Naphthalene		20.0	21.5		ug/Kg ug/Kg		120	77 - 132
Methyl tert-butyl ether		20.0	24.0		agrity		.20	
	LCS LCS							
Surroaata	%Recovery Qualifier	Limits						

	LCS	LUS	
Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	93		80-120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	104		80-120
1,2-Dich/oroethane-d4 (Surr)	106		80-121

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-345397/3-A Matrix: Solid Analysis Batch: 345537			`	Land da		.ert bollk	Control Prep Ty Prep Ba	pe: Tot	al/NA
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Dichlorodifluoromethane	20.0	42.0	*+	ug/Kg	_	210	24 - 150	18	40
Chloromethane	20.0	28.9		ug/Kg		144	52 - 150	4	26
Vinyl chloride	20.0	27.8		ug/Kg		139	54 - 150	13	40
Bromomethane	20.0	27.0		ug/Kg	 Net 1990 (00) 	135	42 - 150	2	40
Chloroethane	20.0	25.4		ug/Kg		127	50 - 150	6	31
Trichlorofluoromethane	20.0	23.4		ug/Kg		117	7 1 - 150	3	36
1,1-Dichloroethene	20.0	25.8		ug/Kg		129	73 - 143	2	34
Methylene Chloride	20.0	24.7	J	ug/Kg		124	66 - 140	8	30
trans-1,2-Dichloroethene	20,0	21.2		ug/Kg		106	77 - 134	2	33
1,1-Dichloroethane	20.0	22.3		ug/Kg		112	78 - 135	2	31
2,2-Dichloropropane	20.0	22.7		ug/Kg		113	62 - 150	3	40
cis-1,2-Dichloroethene	20.0	22.2		ug/Kg		111	68 - 132	0	32
Bromochloromethane	20.0	23.6		ug/Kg		118	76-131	3	28
Chloroform	20.0	21.0		ug/Kg		105	74 - 133	1	36
1,1,1-Trichloroethane	20.0	21.0		ug/Kg		109	78 - 144	3	38
Carbon tetrachloride	20.0	21.3		ug/Kg		114	66 - 150	1	39
1,1-Dichloropropene	20.0	22.7		ug/Kg ug/Kg		106	76 - 140	2	38
	20.0	21.3		ug/Kg ug/Kg		100	70 - 140 79 - 135	4	31
Benzene	the second s		• • • • • • • • • • •			114	76 - 132	4	29
1,2-Dichloroethane	20.0	23.2		ug/Kg					
Trichloroethene	20.0	21.7		ug/Kg		108	80 - 134	0	40
1,2-Dichloropropane	20.0	23.4		ug/Kg		117	65 - 136	6	37
Dibromomethane	20.0	23.8		ug/Kg		119	72 - 130	1	34
Bromodichloromethane	20.0	20.8		ug/Kg		104	73 - 125	2	40
cis-1,3-Dichloropropene	20.0	19.1		ug/Kg		96	80 - 122	3	40
Toluene	20.0	19.0		ug/Kg		95	75 - 137	4	34
trans-1,3-Dichloropropene	20.0	19.0		ug/Kg		95	80 - 121	4	40
1,1,2-Trichloroethane	20.0	20.2	n an thu	ug/Kg		101	80 - 123	1	39
Tetrachloroethene	20.0	17.5		ug/Kg		87	58 - 150	1	40
1,3-Dichloropropane	20.0	20.1		ug/Kg		101	75 - 120	4	37
Dibromochloromethane	20.0	19.1		ug/Kg		96	75 - 132	2	40
1,2-Dibromoethane	20.0	21.5		ug/Kg		107	77 - 123	4	37
Chlorobenzene	20.0	19.0		ug/Kg		95	80 - 131	4	40
Ethylbenzene	20.0	20.5		ug/Kg		103	80 - 135	5	37
1,1,1,2-Tetrachloroethane	20.0	18.9		ug/Kg		95	79 ₋ 128	3	40
1,1,2,2-Tetrachloroethane	20.0	19.5		ug/Kg		97	77 - 127	1	40
m-Xylene & p-Xylene	20.0	17.6		ug/Kg		88	80 - 132	3	38
o-Xylene	20.0	20.0		ug/Kg	55 W M	100	80 - 132	5	39
Styrene	20.0	19.0		ug/Kg		95	79 ₋ 129	3	40
Bromoform	20.0	18,4		ug/Kg		92	71-146	3	40
Isopropylbenzene	20.0	19.2		ug/Kg		96	81 - 140	2	40
Bromobenzene	20.0	19.6		ug/Kg		98	78 - 126	2	40
N-Propylbenzene	20.0	18.6		ug/Kg		93	68 - 149	4	40
1,2,3-Trichloropropane	20.0	19.0		ug/Kg		95	77 - 127	3	40
2-Chlorotoluene	20.0	17.8		ug/Kg		89	77 - 134	7	40
1,3,5-Trimethylbenzene	20.0	18.4		ug/Kg		92	72-142	3	40
4-Chlorotoluene	20.0	17.3	0	ug/Kg	100-0	87	71 - 137	3	40
t-Butylbenzene	20.0	17.3		ug/Kg ug/Kg		90	72 - 144	3	40
1,2,4-Trimethylbenzene	20.0	18.0		ug/Kg ug/Kg		90 94	72 - 144 73 - 138	5	40

QC Sample Results

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580 Matrix: Solid	-345397/3-A	k.			(Client Sa	mple	ID: Lat	Control Prep Ty Prep Ba	pe: Tot	al/NA
Analysis Batch: 345537			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
sec-Butylbenzene			20.0	18.5		ug/Kg		93	71-143	3	40
1,3-Dichlorobenzene			20.0	19.2		ug/Kg		96	78 - 132	5	40
4-Isopropyltoluene			20.0	18.6		ug/Kg		93	71 - 142	5	40
1,4-Dichlorobenzene			20.0	19.3		ug/Kg		96	77 - 123	4	40
n-Butylbenzene			20.0	17.7		ug/Kg		88	69 - 143	6	40
1,2-Dichlorobenzene			20.0	19.4		ug/Kg		97	78 - 126	4	40
1,2-Dibromo-3-Chloropropane			20.0	19.0		ug/Kg		95	75 - 129	5	40
1,2,4-Trichlorobenzene			20.0	20.4		ug/Kg		102	74 - 131	2	40
1,2,3-Trichlorobenzene			20.0	19.3		ug/Kg		97	68 - 136	1	40
Hexachlorobutadiene			20.0	18.6		ug/Kg		93	65 - 150	0	36
Naphthal e ne			20.0	20.8		ug/Kg		104	64 - 136	3	40
Methyl tert-butyl ether			20.0	25.0		ug/Kg		125	77 - 132	4	25
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	91		80 - 120								
4-Bromofluorobenzene (Surr)	102		80 - 120								
Dibromofluoromethane (Surr)	104		80 - 120								
1,2-Dichloroethane-d4 (Surr)	109		80 - 121								

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-344832/1-A Matrix: Solid

Analysis Batch: 345098

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 344832

Analysis Daten. 545050									
A a h-d		MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	ND	quaimer	50		ug/Kg		12/04/20 15:42	12/09/20 12:07	1
1,2,4-Trichlorobenzene			50		ug/Kg		12/04/20 15:42	12/09/20 12:07	1
1,2-Dichlorobenzene	ND				• •		12/04/20 15:42		1
1,3-Dichlorobenzene	ND		50		ug/Kg		12/04/20 15:42	12/09/20 12:07	1
1,4-Dichlorobenzene	ND		50		ug/Kg				1
1-Methylnaphthalene	22.4	J	30		ug/Kg		12/04/20 15:42		1
2,4,5-Trichlorophenol	ND		200		ug/Kg		12/04/20 15:42	12/09/20 12:07	
2,4,6-Trichlorophenol	ND		150	13	ug/Kg			12/09/20 12:07	1
2,4-Dichlorophenol	ND		200	60	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2,4-Dimethylphenol	ND		200	60	ug/Kg		12/04/20 15:42	12/09/20 12:07	
2,4-Dinitrophenol	ND		2000	590	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2,4-Dinitrotoluene	ND		200	43	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2.6-Dinitrotoluene	ND		150	15	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2-Chloronaphthalene	ND	CH 000031-0000	25	5.0	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2-Chlorophenol	ND		200	4.0	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2-Methylnaphthalene	36.5	J	50	8.8	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2-Methylphenol	ND		150	9.8	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2-Nitroaniline	ND		100	15	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
2-Nitrophenol	ND		200	6.2	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
3.3'-Dichlorobenzidine	ND		400	84	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
3-Nitroaniline	ND		300	100	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		12/04/20 15:42	12/09/20 12:07	1
4-Bromophenyl phenyl ether	ND		200	9.1	ug/Kg		12/04/20 15:42	12/09/20 12:07	1

State of the

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analysis Batch: 345098 Analyte 4-Chloro-3-methylphenol 4-Chlorophenyl phenyl ether 4-Chlorophenyl phenyl ether 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]anthracene Benzo[b]fluoranthene Benzo[b]fluoranthene Benzo[c acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Di-n-octyl phthalate Fluoranthene	MB Result ND ND ND ND 21.8 ND 21.8 ND ND ND ND ND ND ND ND	Qualifier J	RL 150 200 150 2000 40 25 60	50 170 4.6	ug/Kg ug/Kg	D	12/04/20 15:42	Prep Batch: Analyzed 12/09/20 12:07 12/09/20 12:07	34483
4-Chloro-3-methylphenol 4-Chlorophenyl phenyl ether 4-Chlorophenyl phenyl ether 4-Nitroaniline 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]anthracene Benzo[a]apyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroisopropyl) ether Butyl benzyl phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-octyl phthalate	Result ND ND ND ND ND 21.8 ND ND ND ND ND	Qualifier J	150 1500 200 150 2000 40 25	33 130 6.3 50 170 4.6	ug/Kg ug/Kg ug/Kg ug/Kg	D	12/04/20 15:42 12/04/20 15:42	12/09/20 12:07	Dil Fa
4-Chloro-3-methylphenol 4-Chlorophenyl phenyl ether 4-Chlorophenyl phenyl ether 4-Nitroaniline 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-ctyl phthalate	ND ND ND ND ND 21.8 ND ND ND ND		150 1500 200 150 2000 40 25	33 130 6.3 50 170 4.6	ug/Kg ug/Kg ug/Kg ug/Kg	81	12/04/20 15:42 12/04/20 15:42	12/09/20 12:07	
4-Chloroaniline 4-Chlorophenyl phenyl ether 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[k]fluoranthene Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate	ND ND ND ND 21.8 ND ND ND ND	.]	1500 200 150 2000 40 25	130 6.3 50 170 4.6	ug/Kg ug/Kg ug/Kg		12/04/20 15:42		
4-Chlorophenyl phenyl ether 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[a]pyrene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[k]fluoranthene Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Dis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-octyl phthalate	ND ND ND 21.8 ND ND ND ND	Ĵ	200 150 2000 40 25	6.3 50 170 4.6	ug/Kg ug/Kg		40/04/00 45 10		111124
I-Nitroaniline I-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[k]fluoranthene Benzo[k]fluo	ND ND 21.8 ND ND ND ND	J	150 2000 40 25	50 170 4.6	ug/Kg		12/04/20 15:42	12/09/20 12:07	
4-Nitrophenol Acenaphthene Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate	ND ND 21.8 ND ND ND ND	J	2000 40 25	170 4.6				12/09/20 12:07	
Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[c acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroisopropyl) ether Bis(2-chloroisopropyl) ether Bis(2-chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Din-n-butyl phthalate Di-n-octyl phthalate	ND ND 21.8 ND ND ND ND	j	40 25	4.6				12/09/20 12:07	
Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[c acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-chloroisopropyl) ether Bis(2-chloroisopropyl) ether Butyl benzyl phthalate Dis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Din-n-butyl phthalate Di-n-octyl phthalate	ND 21.8 ND ND ND ND	j	25		ug/Kg			12/09/20 12:07	
Anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethyi)ether Bis(2-chlor	21.8 ND ND ND ND	J	COLUMN 2 DESCRIPTION	5.0	_			12/09/20 12:07	
Benzo[a]anthracene Benzo[a]pyrene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Bis(2-chloroethoxy)methane Dibenzoli acid Carbazole Chrysene Dibenzole Chrysene Dibenzofuran Diethyl phthalate Din-butyl phthalate Di-n-octyl phthalate	ND ND ND ND		00		ug/Kg			12/09/20 12:07	
Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[g,h,i]perylene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Dimethyl phthalate Din-n-butyl phthalate Di-n-octyl phthalate	ND ND ND ND		40	10	ug/Kg			12/09/20 12:07	
Benzo[b]fluoranthene Benzo[g,h,i]perylene Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-ctyl phthalate	ND ND ND	•••••••••••••••••••••••••••••••••••••••	40 60		ug/Kg			12/09/20 12:07	
Benzo[g,h,i]perylene Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-octyl phthalate	ND ND		40		ug/Kg			12/09/20 12:07	
Benzo[k]fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-octyl phthalate	ND		40 60	18	ug/Kg			12/09/20 12:07	
Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate			60 60		ug/Kg ug/Kg			12/09/20 12:07	
Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Din-butyl phthalate Di-n-octyl phthalate								12/09/20 12:07	
Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate			4000	1200	ug/Kg			12/09/20 12:07	
Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		1000		ug/Kg				
Bis(2-ethylhexyl) phthalate bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		200		ug/Kg			12/09/20 12:07	
bis(chloroisopropyl) ether Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		100	7.7	ug/Kg			12/09/20 12:07	
Butyl benzyl phthalate Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		600	71	ug/Kg			12/09/20 12:07	
Carbazole Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		200	6.1	ug/Kg			12/09/20 12:07	
Chrysene Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		200	51	ug/Kg			12/09/20 12:07	
Dibenz(a,h)anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate Di-n-octyl phthalate	ND		150	7.3	ug/Kg			12/09/20 12:07	
Dibenzofuran Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate Di-n-octyl phthalate	ND		60					12/09/20 12:07	
Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		50		ug/Kg			12/09/20 12:07	
Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate	ND		150		ug/Kg			12/09/20 12:07	
Di-n-butyl phthalate Di-n-octyl phthalate	ND		400	22	ug/Kg			12/09/20 12:07	
Di-n-octyl phthalate	ND		150	5.0	ug/Kg		12/04/20 15:42	12/09/20 12:07	
	ND		500	27	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Fluoranthene	ND		150	12	ug/Kg		12/04/20 15:42	12/09/20 12:07	
	ND		40	12	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Fluorene	ND		25	5.0	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Hexachlorobenzene	ND		50	15	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Hexachlorobutadiene	ND		50	15	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Hexachlorocyclopentadiene	ND		100	7.7	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Hexachloroethane	ND		150	4.3	ug/Kg		12/04/20 15:42	12/09/20 12:07	
Indeno[1,2,3-cd]pyrene	ND		40		ug/Kg		12/04/20 15:42	12/09/20 12:07	
Isophorone	ND		150		ug/Kg		12/04/20 15:42	12/09/20 12:07	
Naphthalene	88.1		25		ug/Kg		12/04/20 15:42	12/09/20 12:07	
Nitrobenzene	ND		200		ug/Kg	- 00000		12/09/20 12:07	000
N-Nitrosodi-n-propylamine	ND		200		ug/Kg			12/09/20 12:07	
N-Nitrosodiphenylamine	ND		60		ug/Kg			12/09/20 12:07	
Pentachlorophenol	ND		400		ug/Kg			12/09/20 12:07	
Phenanthrene	ND		60		ug/Kg			12/09/20 12:07	
Phenol	ND		150		ug/Kg			12/09/20 12:07	
	ND		60		ug/Kg			12/09/20 12:07	
Pyrene			60	13	ug/ng		12/04/20 13.42	12/09/20 12.07	
Surrogate %R	MB coverv	MB Qualifier	Limits				Prepared	Analyzed	Dil I
2-Fluorophenol (Surr)	91		47 - 119					12/09/20 12:07	
Phenol-d5 (Surr)	65		59 - 120					12/09/20 12:07	

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Job ID: 580-99489-1

and the second

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-344 Matrix: Solid Analysis Batch: 345098	1832/1-A						Client Samp	ole ID: Method Prep Type: Te Prep Batch:	otal/NA
	MB	мв							
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	83		54 - 120					12/09/20 12:07	
2-Fluorobiphenyl	87		57 - 120				12/04/20 15:42	12/09/20 12:07	
2,4,6-Tribromophenol (Surr)	88		52 - 115				12/04/20 15:42	12/09/20 12:07	
Terphenyl-d14 (Surr)	93		73 - 125				12/04/20 15:42	12/09/20 12:07	
Lab Sample ID: LCS 580-34 Matrix: Solid	4832/2 - A					Clie	nt Sample ID:	Prep Type: Te	otal/N/
Analysis Batch: 345098								Prep Batch:	344832
			Spike		LCS			%Rec.	
Analyte			Added		Qualifier	Unit	D %Rec	Limits	
1,2,4-Trichlorobenzene			1000	869		ug/Kg	87	66 - 120	
1,2-Dichlorobenzene			1000	853		ug/Kg	85	62 - 120	
1,3-Dichlorobenzene		1	1000	834		ug/Kg	83	57 - 120	• HE E E
1,4-Dichlorobenzene			1000	929		ug/Kg	93	57 - 120	
1-Methylnaphthalene			1000	915		ug/Kg	91	69 - 120	
2,4,5-Trichlorophenol			1000	911		ug/Kg	91	41 ₋ 120	
2,4,6-Trichlorophenol	010011007.0		1000	795		ug/Kg	79	37 - 120	
2,4-Dichlorophenol			1000	826		ug/Kg	83	63 - 120	
2,4-Dimethylphenol			1000	775		ug/Kg	77	31 - 129	
2,4-Dinitrophenol			2000	613	J	ug/Kg	31	10 - 139	
2,4-Dinitrotoluene			1000	748		ug/Kg	75	63 - 120	
2,6-Dinitrotoluene			1000	873		ug/Kg	87	70 - 126	
2-Chloronaphthalene			1000	878		ug/Kg	88	65 - 120	
2-Chlorophenol			1000	905		ug/Kg	91	66 ₋ 120	
2-Methylnaphthalene			1000	1060		ug/Kg	106	70 - 120	
2-Methylphenol		0.000-001-0	1000	689		ug/Kg	69	53 - 120	
2-Nitroaniline			1000	827		ug/Kg	83	54 - 126	
2-Nitrophenol			1000	884		ug/Kg	88	49 - 123	
3 & 4 Methylphenol			1000	750		ug/Kg	75	54 - 120	
3,3'-Dichlorobenzidine			2000	1800		ug/Kg	90	49 - 148	
3-Nitroaniline			1000	721		ug/Kg	72	34 - 120	
4,6-Dinitro-2-methylphenol			2000	1180		ug/Kg	59	13 - 141	
			1000	817		ug/Kg	82	65 - 127	
4-Bromophenyl phenyl ether			1000	811		ug/Kg	81	55 - 120	
4-Chloro-3-methylphenol		see a k	1000	283	a, più trava	ug/Kg		10 - 120	
4-Chloroaniline			1000	798	J	ug/Kg ug/Kg		70 - 120	
4-Chlorophenyl phenyl ether				860			86	36 - 141	
4-Nitroaniline			1000	1510	Ϋ́	ug/Kg ug/Kg		10 - 140	
4-Nitrophenol			2000		J				
Acenaphthene			1000	841		ug/Kg		64 - 120 63 - 120	
Acenaphthylene		192112-11-2	1000	872		ug/Kg			
Anthracene			1000	920		ug/Kg		67 - 131	
Benzo[a]anthracene			1000	1050		ug/Kg		60 - 135	
Benzo[a]pyrene	1212 23:0000 00		1000	900		ug/Kg		62 - 129	0.482
Benzo[b]fluoranthene			1000	853		ug/Kg		58 - 136	
Benzo[g,h,i]perylene			1000	919		ug/Kg		64 - 146	
Benzo[k]fluoranthene			1000	1040		ug/Kg		68 - 123	
Benzoic acid			2000	ND		ug/Kg		10 - 120	
Benzyl alcohol			1000	650	J	ug/Kg	65	10 - 134	

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-344832/2-A Matrix: Solid Analysis Batch: 345098				Clie	nt Sai	mple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 344832
	Spike		LCS		_		%Rec.
Analyte	Added		Qualifier	Unit	<u> </u>	%Rec	Limits
Bis(2-chloroethoxy)methane	1000	809		ug/Kg		81	60 - 120
Bis(2-chloroethyl)ether	1000	890		ug/Kg		89	61 - 120
Bis(2-ethylhexyl) phthalate	1000	1170		ug/Kg		117	45 - 150
bis(chloroisopropyl) ether	1000	731		ug/Kg		73	55 - 120
Butyl benzyl phthalate	1000	1130		ug/Kg		113	58 - 150
Carbazole	1000	870		ug/Kg		87	43 - 150
Chrysene	1000	1080		ug/Kg		108	69 - 127
Dibenz(a,h)anthracene	1000	950		ug/Kg		95	59 - 139
Dibenzofuran	1000	824		ug/Kg		82	68 - 120
Diethyl phthalate	1000	886		ug/Kg		89	66 - 135
Dimethyl phthalate	1000	887		ug/Kg		89	71 - 120
Di-n-butyl phthalate	1000	1020		ug/Kg		102	66 - 150
Di-n-octyl phthalate	1000	1010		ug/Kg		101	53 - 150
Fluoranthene	1000	905		ug/Kg		90	69 - 133
Fluorene	1000	857		ug/Kg		86	68 - 121
Hexachlorobenzene	1000	953		ug/Kg		95	65 - 126
Hexachlorobutadiene	1000	894		ug/Kg		89	64 - 130
Hexachlorocyclopentadiene	1000	722		ug/Kg		72	53 - 131
Hexachloroethane	1000	933		ug/Kg		93	57 - 132
Indeno[1,2,3-cd]pyrene	1000	805		ug/Kg		81	52 - 146
Isophorone	1000	860		ug/Kg		86	61 - 128
Naphthalene	1000	903		ug/Kg		90	68 - 120
Nitrobenzene	1000	828		ug/Kg		83	57 - 128
N-Nitrosodi-n-propylamine	1000	844		ug/Kg		84	56 - 138
N-Nitrosodiphenylamine	1000	863		ug/Kg		86	67 - 128
Pentachlorophenol	2000	1600		ug/Kg		80	10 - 120
Phenanthrene	1000	895		ug/Kg		90	68 - 126
Phenol	1000	704		ug/Kg		70	59 - 120
Pyrene	1000	895		ug/Kg		89	68 - 141

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	91		47 - 119
Phenol-d5 (Surr)	85		59 - 120
Nitrobenzene-d5 (Surr)	89		54 - 120
2-Fluorobiphenyl	86		57 - 120
2,4,6-Tribromophenol (Surr)	100		52 - 115
Terphenyl-d14 (Surr)	101		73 - 125

Lab Sample ID: 580-99489-1 MS Matrix: Solid

Matrix: Solid Analysis Batch: 344983							•	-	Prep Type: Total/NA Prep Batch: 344832
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	ND		1070	947		ug/Kg	☆	88	66 - 120
1,2-Dichlorobenzene	ND		1070	870		ug/Kg	⇔	81	62 - 120
1,3-Dichlorobenzene	ND		1070	827		ug/Kg	₿	77	57 - 120
1,4-Dichlorobenzene	ND		1070	864		ug/Kg	☆	81	57 - 120
1-Methylnaphthalene	ND		1070	905		ug/Kg	☆	85	69 ₋ 120

Eurofins TestAmerica, Seattle

Client Sample ID: High Top Solar B-REC-2A

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99489- Matrix: Solid Analysis Batch: 344983	1 MS				С	lient Sar	npie l	u: High	Top Solar B-REC-2A Prep Type: Total/NA Prep Batch: 344832		
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
2,4,5-Trichlorophenol		F2	1070	712		ug/Kg	¢	67	41 - 120		
2,4,6-Trichlorophenol	ND	F2	1070	814		ug/Kg	¢	76	37 - 120		
2,4-Dichlorophenol	ND		1070	859		ug/Kg	¢	80	63 - 120		
2,4-Dimethylphenol	ND		1070	865		ug/Kg	¢	81	31 - 129		
2,4-Dinitrophenol	ND	F1	2140	ND	F1	ug/Kg	¢	0	10_139		
2,4-Dinitrotoluene	ND	F2	1070	688		ug/Kg	¢	64	63 - 120		
2,6-Dinitrotoluene	ND	F2	1070	824		ug/Kg	₽	77	70 - 126		
2-Chloronaphthalene	ND		1070	804		ug/Kg	\$	75	65 - 120		
2-Chlorophenol	ND		1070	763		ug/Kg	¢	71	66 - 120		
2-Methylnaphthalene	ND		1070	1200		ug/Kg	¢	112	70 - 120		
2-Methylphenol	ND		1070	711		ug/Kg	¢	66	53 - 120		
2-Nitroaniline	ND		1070	730		ug/Kg	¢	68	54 - 126		
2-Nitrophenol	ND		1070	854		ug/Kg	¢	80	49 - 123		
3 & 4 Methylphenol	ND		1070	710		ug/Kg	¢	66	54 - 120		
3,3'-Dichlorobenzidine		F2 F1	2140	461	F1	ug/Kg	¢	22	49 - 148		
3-Nitroaniline	ND		1070	382		ug/Kg	¢	36	34 - 120		
4,6-Dinitro-2-methylphenol	ND		2140	723	J	ug/Kg	¢	34	13 - 141		
4-Bromophenyl phenyl ether	ND		1070	948		ug/Kg	₽	89	65 - 127		
4-Chloro-3-methylphenol		F2	1070	722		ug/Kg	¢	67	55 - 120		
4-Chloroaniline	ND	G	1070	200	j li stat	ug/Kg	¢	19	10 - 120		
4-Chlorophenyl phenyl ether	ND		1070	920		ug/Kg	¢	86	70 - 120		
4-Nitroaniline	ND		1070	554		ug/Kg	¢	52	36 - 141		
4-Nitrophenol		F2	2140	1270	j	ug/Kg	¢	59	10 - 140		
Acenaphthene	ND	12	1070	847	-	ug/Kg	¢	79	64 - 120		
Acenaphthylene	ND		1070	827		ug/Kg	¢	77	63 - 120		
Anthracene	ND		1070	872		ug/Kg	¢	82	67 - 131		
	ND		1070	831		ug/Kg	¢	78	60 - 135		
Benzo[a]anthracene	ND		1070	867		ug/Kg	¢	81	62 - 129		
Benzo[a]pyrene	ND		1070	905		ug/Kg		85	58 - 136		
Benzo[b]fluoranthene	ND		1070	815		ug/Kg	¢	76	64 - 146		
Benzo[g,h,i]perylene			1070	799		ug/Kg	¢	75	68 - 123		
Benzo[k]fluoranthene	ND	124 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -		ND	E1	ug/Kg	Ť. ¢	0	10 - 120		
Benzoic acid	ND	FI	2140	566		ug/Kg ug/Kg	¢	53	10 - 134		
Benzyl alcohol	ND		1070		J		¢.	78	60 - 120		
Bis(2-chloroethoxy)methane	ND		1070	839		ug/Kg		80	61 - 120		
Bis(2-chloroethyl)ether	ND		1070	858		ug/Kg	\$ \$	85	45 - 150		
Bis(2-ethylhexyl) phthalate	240	J	1070	1150		ug/Kg	¢		45 - 150 55 - 120		
bis(chloroisopropyl) ether	ND		1070	874		ug/Kg	¢. U	82			
Butyl benzyl phthalate	ND		1070	1040		ug/Kg	\$	97	58 - 150		
Carbazole	ND		1070	1030		ug/Kg	¢	96	43 - 150		
Chrysene	ND		1070	899		ug/Kg	¢	84	69 - 127		
Dibenz(a,h)anthracene	ND		1070	943		ug/Kg	\$	88	59 - 139		
Dibenzofuran	ND		1070	880		ug/Kg	¢	82	68 - 120		
Diethyl phthalate	ND		1070	858		ug/Kg	¢	80	66 - 135		
Dimethyl phthalate	ND		1070	867		ug/Kg	₽	81	71 - 120		
Di-n-butyl phthalate	ND		1070	1010		ug/Kg	¢	94	66 - 150		
Di-n-octyl phthalate	ND		1070	953		ug/Kg	.	89	53 - 150		
Fluoranthene	ND		1070	955		ug/Kg	¢	89	69 - 133		
Fluorene	ND	F2	1070	860		ug/Kg	¢	80	68 - 121		
Hexachlorobenzene	ND		1070	928		ug/Kg	¢	87	65 - 126		

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99489- Matrix: Solid Analysis Batch: 344983	1 MS				C	lient San	nple I	D: High	Top Solar B-REC-2A Prep Type: Total/NA Prep Batch: 344832		
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Hexachlorobutadiene	ND		1070	1120		ug/Kg	æ	104	64 - 130		
Hexachlorocyclopentadiene	ND	F1	1070	299	F1	ug/Kg	₩	28	53 - 131		
Hexachloroethane	ND		1070	943		ug/Kg	¢	88	57 - 132		
Indeno[1,2,3-cd]pyrene	ND		1070	849	LL	ug/Kg	¢	79	52 - 146		
Isophorone	ND		1070	917		ug/Kg	⇔	86	61 - 128		
Naphthalene	ND		1070	938		ug/Kg	¢	88	68 - 120		
Nitrobenzene	ND		1070	1010		ug/Kg	¢	95	57 - 128		
N-Nitrosodi-n-propylamine	ND		1070	882		ug/Kg	⇔	82	56 ₋ 138		
N-Nitrosodiphenylamine	ND		1070	911		ug/Kg	¢	85	67 - 128		
Pentachlorophenol	ND	F2	2140	843		ug/Kg	¢	39	10 - 120		
Phenanthrene	ND		1070	888		ug/Kg	æ	83	68 - 126		
Phenol	ND		1070	670		ug/Kg	⇔	63	59 - 120		
Pyrene	ND		1070	947		ug/Kg	¢	89	68 - 141		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	67		47 - 119
Phenol-d5 (Surr)	72		59 - 120
Nitrobenzene-d5 (Surr)	76		54 - 120
2-Fluorobiphenyl	75		57 - 120
2,4,6-Tribromophenol (Surr)	82		52 - 115
Terphenyl-d14 (Surr)	80		73 - 125

Lab Sample ID: 580-99489-1 MSD Matrix: Solid Analysis Batch: 344983

Client Sample ID: High Top Solar B-REC-2A Prep Type: Total/NA

Prep Batch: 344832 Analysis Batch: 344983 MSD MSD RPD Spike %Rec. Sample Sample Limit Result Qualifier Added **Result Qualifier** Unit D %Rec Limits RPD Analyte æ 96 66 - 120 11 18 1.2.4-Trichlorobenzene ND 1100 1060 ug/Kg 93 62 - 120 30 1,2-Dichlorobenzene ND 1100 1020 ug/Kg ₽ 16 1.3-Dichlorobenzene ND 1100 991 ug/Kg ₽ 90 57-120 18 29 ND 1100 1000 91 57-120 15 35 1,4-Dichlorobenzene ug/Kg Ϋ́ ND 1100 1070 æ 97 69 - 120 17 24 1-Methylnaphthalene ug/Kg 83 41 - 120 25 23 ND F2 1100 ₽ 2,4,5-Trichlorophenol 919 F2 ug/Kg 25 20 2,4,6-Trichlorophenol ND F2 1100 1050 F2 ug/Kg ₽ 95 37 - 120 ND 1100 932 ₽ 85 63-120 8 19 2,4-Dichlorophenol ug/Kg 89 1100 977 31 - 129 12 40 2,4-Dimethylphenol ND ug/Kg ₿ ND F1 0 10 - 139 NC 40 2,4-Dinitrophenol ND F1 2210 ug/Kg ऴ ND F2 1100 915 F2 83 63 - 120 28 23 2,4-Dinitrotoluene ug/Kg ÷ ND F2 1100 1040 F2 ₩ 95 70 - 126 24 18 2.6-Dinitrotoluene ug/Kg 88 21 2-Chloronaphthalene ND 1100 974 ug/Kg 55 65 - 120 19 ND 1100 939 ☆ 85 66 - 120 21 32 2-Chlorophenol ug/Kg ND 1100 1320 119 70 - 120 9 21 ug/Kg ä 2-Methylnaphthalene 2-Methylphenol ND 1100 819 ug/Kg ₽ 74 53 - 120 14 40 16 2-Nitroaniline ND 1100 849 ₩ 77 54 - 126 15 ug/Kg 1010 30 2-Nitrophenol ND 1100 ug/Kg ₽ 92 49 - 123 17 3 & 4 Methylphenol ND 1100 834 ug/Kg ⇔ 76 54 - 120 16 36 11 49 - 148 62 40 3,3'-Dichlorobenzidine ND F2 F1 2210 242 J F2 F1 ug/Kg ÷ 3-Nitroaniline ND F1 1100 301 JF1 ug/Kg ₿ 27 34 - 120 24 25

QC Sample Results

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99489- Matrix: Solid Analysis Batch: 344983						Client Sar	nple I	D: High	Top Sola Prep Ty Prep Ba %Rec.	pe: Tot	al/NA
	-	Sample	Spike		MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Analyte	ND	Qualifier	Added		J F2	ug/Kg	- -	49	13 - 141	41	40
4,6-Dinitro-2-methylphenol	The second s	F2	1100	1050	012	ug/Kg	÷.	96	65 - 127	11	32
4-Bromophenyl phenyl ether	ND	F2	1100	953	F 2	ug/Kg	¢.	86	55 - 120	28	25
4-Chloro-3-methylphenol	ND	FZ	1100	179		ug/Kg	÷. ¢	16	10 - 120	11	40
4-Chloroaniline	ND		1100	1070	5	ug/Kg	¢	97	70 - 120	15	21
4-Chlorophenyl phenyl ether	ND		1100	587		ug/Kg	÷.	53	36 - 141	6	23
4-Nitroaniline	ND	52	2210		J F2	ug/Kg		31	10 - 140	61	31
4-Nitrophenol	ND	FZ	1100	972	JFZ	ug/Kg	¢	88	64 - 120	14	19
Acenaphthene	ND		1100	968		ug/Kg	¢	88	63 - 120	16	18
Acenaphthylene	ND		1100	976		ug/Kg	÷	89	67 - 131	11	28
Anthracene	ND		1100	970		ug/Kg ug/Kg	¢.	84	60 - 135	11	21
Benzo[a]anthracene	ND		1100	924		ug/Kg ug/Kg	¢.	86	62 - 129	9	27
Benzo[a]pyrene	ND				212222-21		¢.	90	58 - 136	10	25
Benzo[b]fluoranthene	ND		1100	997		ug/Kg	÷ ¢	90 82	64 - 146	10	26
Benzo[g,h,i]perylene	ND		1100	901		ug/Kg	¢	84	68 - 123	15	18
Benzo[k]fluoranthene	ND		1100	927		ug/Kg		04	10 - 120	NC	40
Benzoic acid	ND	F1	2210	ND		ug/Kg	¢		10 - 120	5	40
Benzyl alcohol	ND		1100	592	J	ug/Kg	¢	54	60 - 120	17	33
Bis(2-chloroethoxy)methane	ND		1100	995		ug/Kg	¢ 	90	61_120	26	30
Bis(2-chloroethyl)ether	ND		1100	1120		ug/Kg	¢	101		20 19	25
Bis(2-ethylhexyl) phthalate	240	J	1100	1390		ug/Kg	¢	104	45 - 150	18	33
bis(chloroisopropyl) ether	ND		1100	1040		ug/Kg	÷	95	55 - 120	16	27
Butyl benzyl phthalate	ND		1100	1220		ug/Kg	¢	111	58 - 150	15	24
Carbazole	ND		1100	1200		ug/Kg	¢	109	43 - 150	12	24
Chrysene	ND		1100	1010		ug/Kg	\$	92	69-127	12	29
Dibenz(a,h)anthracene	ND		1100	1040		ug/Kg	¢	94	59-139	18	18
Dibenzofuran	ND		1100	1050		ug/Kg	¢	95	68 - 120		22
Diethyl phthalate	ND		1100	1010		ug/Kg	¢	92	66 - 135	16	21
Dimethyl phthalate	ND		1100	1030		ug/Kg	₽	94	71 - 120	17	26
Di-n-butyl phthalate	ND		1100	1160		ug/Kg	¢	105	66 - 150	14	20 18
Di-n-octyl phthalate	ND	CONTRACTOR A	1100	1110		ug/Kg		100	53 - 150	15	
Fluoranthene	ND		1100	1040		ug/Kg	₽	94	69-133	9	21
Fluorene	ND	F2	1100	1030	F2	ug/Kg	‡	93	68 - 121	18	17
Hexachlorobenzene	ND		1100	984		ug/Kg	¢	89	65 - 126	6	32
Hexachlorobutadiene	ND		1100	1270		ug/Kg	₽	116	64 - 130	13	19
Hexachlorocyclopentadiene	ND	F1	1100	350	F1	ug/Kg	¢	32	53 - 131	16	21
Hexachloroethane	ND		1100	1080		ug/Kg	\$	98	57 - 132	14	34
Indeno[1,2,3-cd]pyrene	ND		1100	909		ug/Kg	¢	82	52-146	7	30
Isophorone	ND		1100	1120		ug/Kg	₽	102	61 - 128	20	31
Naphthalene	ND		1100	1020		ug/Kg	₽.	92	68 - 120	8	15
Nitrobenzene	ND		1100	1300	0.00	ug/Kg	¢	118	57 - 128	25	33
N-Nitrosodi-n-propylamine	ND		1100	1090		ug/Kg	₽	99	56 - 138	22	35
N-Nitrosodiphenylamine	ND		1100	1010		ug/Kg	¢	91	67 - 128	10	30
Pentachlorophenol	ND	F2	2210	1390	F2	ug/Kg	⋫	63	10 - 120	49	40
Phenanthrene	ND		1100	972		ug/Kg	¢	88	68 - 126	9	27
Phenol	ND		1100	841		ug/Kg	₽	76	59 - 120	23	30
Pyrene	ND		1100	1020		ug/Kg	¢	93	68 - 141	8	24

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Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344983	9-1 MSD				С	lient San	nple	D: High	Top Solar B Prep Type: Prep Batch	Total/N/
	MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits							
2-Fluorophenol (Surr)	79		47_119							
Phenol-d5 (Surr)	87		59 - 120							
Nitrobenzene-d5 (Surr)	83		54 - 120							
2-Fluorobiphenyl	89		57 - 120							
2,4,6-Tribromophenol (Surr)	95		52 - 115							
Terphenyl-d14 (Surr)	90		73-125							
lethod: NWTPH-Gx -		- Volatile	Petroleu	m Proc	lucts (C	SC)				
Lab Sample ID: MB 580-3 Matrix: Solid	44970/1-A						Clie	ent Samp	ole ID: Metho Prep Type:	
Analysis Batch: 345040									Prep Batch	
Analysis Batch. 545040		МВ МВ							пер васси	
Analyte		sult Qualifier	R	L	MDL Unit	D	P	repared	Analyzed	Dil Fa
Gasoline		ND			2.3 mg/K		_	<u> </u>	12/08/20 00:34	
				-		0				
		MB MB								
Surrogate	%Recov	ery Qualifier	Limits					repared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		89	50 - 150				12/0	07/20 16:08	12/08/20 00:3	4
Lab Sample ID: LCS 580- Matrix: Solid Analysis Batch: 345040	344970/2-A				1.65	Clier	it Sa	mple ID:	Lab Control Prep Type: Prep Batch %Rec.	Total/N
······			Spike	LCS	200				/01000	
-			Spike Added		Qualifier	Unit	D	%Rec	Limits	
Analyte	e (5		•			Unit mg/Kg	D	%Rec 95		
Analyte			Added	Result			<u>D</u>		Limits	
Analyte Gasoline	LCS		Added 40.0	Result			<u>D</u>		Limits	
Analyte Gasoline Surrogate	%Recovery		Added 40.0	Result			D		Limits	
Analyte Gasoline			Added 40.0	Result			<u>D</u>		Limits	
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580 Matrix: Solid	%Recovery 94		Added 40.0	Result	Qualifier	mg/Kg		95	Limits 80-120 Control Sam Prep Type:	Total/N
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580	%Recovery 94		Added 40.0 <i>Limits</i> 50 - 150	Result 37.8	Qualifier (mg/Kg		95	Limits 80-120 Control Sam Prep Type: Prep Batch	Total/N/ : 34497
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 345040	%Recovery 94		Added 40.0 <i>Limits</i> 50 - 150 Spike	Result 37.8	Qualifier (LCSD	mg/Kg Client Sar	nple	95 ID: Lab	Limits 80-120 Control Sam Prep Type: Prep Batch %Rec.	Total/N : 34497 RP
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 345040 Analyte	%Recovery 94		Added 40.0 <i>Limits</i> 50 - 150 Spike Added	Result 37.8 LCSD Result	Qualifier (mg/Kg Client Sar	nple	95 ID: Lab %Rec	Limits 80 - 120 Control Sam Prep Type: Prep Batch %Rec. Limits RI	Total/N : 34497 RP PD Lim
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 345040	%Recovery 94		Added 40.0 <i>Limits</i> 50 - 150 Spike	Result 37.8	Qualifier (LCSD	mg/Kg Client Sar	nple	95 ID: Lab	Limits 80-120 Control Sam Prep Type: Prep Batch %Rec.	Total/N : 34497 RPI PD Lim
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 345040 Analyte	%Recovery 94	Qualifier	Added 40.0 <i>Limits</i> 50 - 150 Spike Added	Result 37.8 LCSD Result	Qualifier (LCSD	mg/Kg Client Sar	nple	95 ID: Lab %Rec	Limits 80 - 120 Control Sam Prep Type: Prep Batch %Rec. Limits RI	Total/N : 34497 RP PD Lim
Analyte Gasoline Surrogate 4-Bromofluorobenzene (Surr) Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 345040 Analyte	%Recovery 94 0-344970/3-A	Qualifier	Added 40.0 <i>Limits</i> 50 - 150 Spike Added	Result 37.8 LCSD Result	Qualifier (LCSD	mg/Kg Client Sar	nple	95 ID: Lab %Rec	Limits 80 - 120 Control Sam Prep Type: Prep Batch %Rec. Limits RI	Total/N : 34497 RPI PD Lim

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-344 Matrix: Solid Analysis Batch: 344993	824/1-A							le ID: Method Prep Type: To Prep Batch: 3	otal/NA
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		50	12	mg/Kg	_	12/04/20 13:02	12/07/20 19:02	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		12/04/20 13:02	12/07/20 19:02	1

QC Sample Results

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Matrix: Solid

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 580-34 Matrix: Solid Analysis Batch: 344993	14824/1-A							Clie	ent Sam	ple ID: M Prep Ty Prep Ba	pe: Tot	al/NA
		MB MI	в									
Surrogate	%Recov	very Qu	ualifier	Limits				P	repared	Analyz	zed	Dil Fac
o-Terphenyl		97		50 - 150				12/0	4/20 13:0	2 12/07/20	19:02	
Lab Sample ID: LCS 580-3	344824/2-A						Clier	nt Sar	nple ID	: Lab Cor	ntrol Sa	mpl
Matrix: Solid										Prep Ty		
Analysis Batch: 344993										Prep Ba	atch: 34	4482
				Spike	LCS	LCS				%Rec.		
Analyte				Added	Result	Qualifier	Unit	D	%Rec	Limits		
#2 Diesel (C10-C24)			-	500	466		mg/Kg		93	70 - 125		
Motor Oil (>C24-C36)				500	470		mg/Kg		94	70 - 129		
	LCS	1.05										
0	%Recovery	-	or	Limits								
Surrogate o-Terphenyl	83	Guaun	er	50 - 150								
Matrix: Solid	-544024/5-A			Caliba	1.050	LCSD				Prep Ty Prep Ba		4482
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	LCSD %Recovery	LCSD	er	Spike Added 500 500		LCSD Qualifier	Unit mg/Kg mg/Kg	<u>D</u>	%Rec 93 93			44824 RPI Lim
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl	LCSD %Recovery 80	LCSD	er	Added 500 500	Result 465	Qualifier	mg/Kg mg/Kg		93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	RPD 0 1	44824 RPI Limi 1 1
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489	LCSD %Recovery 80	LCSD	er	Added 500 500	Result 465	Qualifier	mg/Kg mg/Kg		93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	atch: 34	44824 RPI Lim 1 1
Lab Sample ID: LCSD 580 Matrix: Solid Analysis Batch: 344993 #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid	LCSD %Recovery 80	LCSD	er	Added 500 500	Result 465	Qualifier	mg/Kg mg/Kg		93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	atch: 34 <u>RPD</u> 0 1 ar B-RE pe: Tot	44824 RPI Limi 1 1 5 5 6 7
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489	LCSD %Recovery 80 9-2 DU	LCSD Qualifi		Added 500 500	Result 465 465	Qualifier	mg/Kg mg/Kg		93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	atch: 34 <u>RPD</u> 0 1 ar B-RE pe: Tot	44824 RPI Limi 1 1 2 2 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993	LCSD %Recovery 80 9-2 DU Sample	LCSD Qualifie Sample	e	Added 500 500	Result 465 465 DU	Qualifier Cl	mg/Kg mg/Kg ient San	nple I	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	Arch: 34 <u>RPD</u> 0 1 ar B-RE pe: Tot atch: 34	44824 RPI Limi 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993 Analyte	LCSD %Recovery 80 9-2 DU Sample Result	LCSD Qualifi	e	Added 500 500	Result 465 465 DU Result	Qualifier Cl DU Qualifier	mg/Kg mg/Kg ient San Unit	nple I D	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	atch: 34 <u>RPD</u> 0 1 ar B-RE pe: Tot atch: 34 <u>RPD</u>	44824 RPI Limi 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24)	LCSD %Recovery 80 9-2 DU Sample Result ND	LCSD Qualifie Sample	e	Added 500 500	Result 465 465 00 Result 14.5	Qualifier Cl DU Qualifier	mg/Kg mg/Kg ient San Unit mg/Kg	nple I	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	ar B-RE pe: Tot NC	44824 RPI Limi 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993 Analyte	LCSD %Recovery 80 9-2 DU Sample Result	LCSD Qualifie Sample	e	Added 500 500	Result 465 465 DU Result	Qualifier Cl DU Qualifier	mg/Kg mg/Kg ient San Unit	nple I D	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	atch: 34 <u>RPD</u> 0 1 ar B-RE pe: Tot atch: 34 <u>RPD</u>	44824 RPI Limi 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24)	LCSD %Recovery 80 9-2 DU Sample Result ND	LCSD Qualifie Sample Qualifie	e	Added 500 500	Result 465 465 00 Result 14.5	Qualifier Cl DU Qualifier	mg/Kg mg/Kg ient San Unit mg/Kg	nple I	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	ar B-RE pe: Tot NC	44824 RPI Limi 10 10 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24)	LCSD %Recovery 80 9-2 DU Sample Result ND 100	LCSD Qualifie Sample Qualifie DU	e er	Added 500 500	Result 465 465 00 Result 14.5	Qualifier Cl DU Qualifier	mg/Kg mg/Kg ient San Unit mg/Kg	nple I	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	ar B-RE pe: Tot NC	4482 RPI Lim 1 1 1 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8
Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl Lab Sample ID: 580-99489 Matrix: Solid Analysis Batch: 344993 Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36)	LCSD %Recovery 80 9-2 DU Sample Result ND 100 DU	LCSD Qualifie Sample Qualifie DU	e er	Added 500 500 Limits 50 - 150	Result 465 465 00 Result 14.5	Qualifier Cl DU Qualifier	mg/Kg mg/Kg ient San Unit mg/Kg	nple I	93 93	Prep Ba %Rec. Limits 70 - 125 70 - 129	ar B-RE pe: Tot NC	44824 RPI Limi 10 10 10 10 10 10 10 10 10 10 10 10 10

Prep Type: Total/NA Prep Batch: 345245

Analysis Batch: 345371								Prep Batch:	345245
	MB	MB							
Analyte	Result	Qualifier	RL	MDL.	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	0.25	mg/Kg		12/10/20 11:47	12/11/20 13:56	1
Cadmium	0.365	J	1.0	0.049	mg/Kg		12/10/20 11:47	12/11/20 13:56	1
Chromium	ND		1.3	0.22	mg/Kg		12/10/20 11:47	12/11/20 13:56	1
Lead	ND		1.5	0.22	mg/Kg		12/10/20 11:47	12/11/20 13:56	1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 345245

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Lab Control Sample Dup

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 580-345245/22-A Matrix: Solid Analysis Batch: 345371	Spiles	1.00	LCS	Clier	nt Sai	mple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 345245 %Rec.
	Spike					_	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	50.0	54.6		mg/Kg		109	80 - 120
Cadmium	50.0	57.5		mg/Kg		115	80 - 120
Chromium	50.0	53.6		mg/Kg		107	80 - 120
Lead	50.0	57.6		mg/Kg		115	80 - 120

Lab Sample ID: LCSD 580-345245/23-A

Matrix: Solid - - - - - -

1	Analysis Batch: 345371						Prep Ba	tch: 34	15245		
	-	Spike	LCSD	LCSD				%Rec.		RPD	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1	Arsenic	50.0	53.2		mg/Kg		106	80 - 120	3	20	
ľ	Cadmium	50.0	55.3		mg/Kg		111	80 - 120	4	20	
	Chromium	50.0	51.9		mg/Kg		104	80 - 120	3	20	
	Lead	50.0	55.9		mg/Kg		112	80 - 120	3	20	

Lab Sample ID: 580-99605-A-1-C MS

Matrix: Solid Analysis Batch: 3/15371

Analysis Batch: 345371	Sample	Sample	Spike	MS	MS				Prep Ba %Rec.	atch: 345245
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	
Arsenic	15		45.2	65.5		mg/Kg	\$	112	80 - 120	
Cadmium	0.16	JB	45.2	51.6		mg/Kg	☆	114	80 - 120	
Chromium	21		45.2	75.7		mg/Kg	☆	120	80 - 120	
Lead	48	F1	45.2	106	F1	mg/Kg	☆	129	80 - 120	

Lab Sample ID: 580-99605-A-1-D MSD Matrix: Solid

Analysis Batch: 345371

Analysis Daton. 940071									1100 00		
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	15		43.6	60.5		mg/Kg	\$	104	80 - 120	8	20
Cadmium	0.16	JB	43.6	49.3		mg/Kg	☆	113	80 - 120	4	20
Chromium	21		43.6	70.8		mg/Kg	☆	114	80 - 120	7	20
Lead	48	F1	43.6	97.0		mg/Kg	⇔	112	80 - 120	9	20

Lab Sample ID: 580-99605-A-1-B DU Matrix: Solid

	Analysis Batch: 345371							Prep Batch: 3	
	-	Sample	Sample	DU	DU				RPD
	Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
	Arsenic	15		12.5		mg/Kg	¢	18	20
	Cadmium	0.16	JB	0.107	J F5	mg/Kg	₽	38	20
	Chromium	21		24.2		mg/Kg	¢	13	20
Į	Lead	48		46.3		mg/Kg	¢	4	20

Client Sample ID: Duplicate

Prep Type: Total/NA

QC Sample Results

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-34536	62/22-A							С	lie	nt Samp	ple ID: Me		
Matrix: Solid											Prep Typ		
Analysis Batch: 345462											Prep Ba	tch: 3	34536
-		MB MB											
Analyte	Re	sult Qualifier		RL	MDL	Unit		D		epared	Analyz		Dil Fa
Mercury		ND		0.030	0.0090	mg/K	g	12	2/1	1/20 12:16	12/11/20	17:08	
Lab Sample ID: LCS 580-3453	62/23-A						Clie	ent S	an	nple ID:	Lab Con		
Matrix: Solid											Prep Typ	pe: To	tal/N
Analysis Batch: 345462											Prep Ba	tch: 3	34536
			Spike	L	S LC	S					%Rec.		
Analyte			Added	Res	ilt Qu	alifier	Unit	1	D	%Rec	Limits		
Mercury		(0.167	0.1	51		mg/Kg			97	80 - 120		
Lab Sample ID: LCSD 580-345	5362/24-	Δ				c	Client Sa	ampl	le	ID: Lab	Control S	Sampl	le Du
Matrix: Solid											Prep Typ		
Analysis Batch: 345462											Prep Ba		
Analysis Batch. 343402			Spike	LC	DLC	SD					%Rec.		RP
a polyte			Added		ilt Qu	-	Unit		D	%Rec	Limits	RPD	Lin
Analyte			0.167	0.1			mg/Kg	_		96	80 - 120	1	
L 0	10					C	liont Sa	mole	۱۱ د	D: High	Top Sola	r B-R	FC-2
Lab Sample ID: 580-99489-1 N	13					0	ilent Ja	mpie	7 11	o. mgn	Prep Typ		
Matrix: Solid											Prep Ba		
Analysis Batch: 345462	a 1	0	Calles		IS MS						%Rec.		
		Sample	Spike				Unit		D	%Rec	Limits		
Analyte		Qualifier	Added							141	80 - 120		
Mercury	0.0071	J F 1	0.121	0.1	78 F1		mg/Kg	3	Ļr	141	00 - 120		
Lab Sample ID: 580-99489-1 N	ISD					C	lient Sa	mple	e II	D: High	Top Sola		
Matrix: Solid											Prep Ty		
Analysis Batch: 345462						_					Prep Ba	itch: 3	94330 RP
	Sample	Sample	Spike		D MS	_		_	_		%Rec.		
Analyte		Qualifier	Added		lt Qu	alifier	Unit		D	%Rec	Limits	RPD	
Mercury	0.0071	J F1	0.122	0.1	7 F1		mg/Kg	3	¢	139	80 - 120	1	2
Lab Sample ID: 580-99489-1 D	U					C	lient Sa	mple	e li	D: High	Top Sola		
Matrix: Solid											Prep Typ		
Analysis Batch: 345462											Prep Ba	tch: 3	
	Sample	Sample			U DU								RP
Analyte	Result	Qualifier		Res	ilt Qua	alifier	Unit		D			RPD	
	0.0071	J F1		0.009	8 JF	5	mg/Kg	3	¢			34	2
Mercury	0.0071	•••											

Lab Sample ID: 580-993 Matrix: Solid Analysis Batch: 344957							Client Sample ID: Dup Prep Type: Tot	tal/NA
-		Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	89.0		89.7		%		0.8	20
Percent Moisture	11.0		10.3		%		7	20

12/17/2020

ate Collecte	ple ID: Hig d: 11/30/20 0 d: 12/03/20 1		3-REC-2/	4			Lab S	Sample ID:	580-99489-1 Matrix: Solic
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	2540G		1	344957	12/07/20 14:48	NRS	TAL SEA	
Client Sam Date Collecte Date Receive	d: 11/30/20 0		3-REC-2/	A			Lab S	•	580-99489-1 Matrix: Solid ent Solids: 89.0
	Batch	Batch		Dilution	Batch	Prepared			
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	5035	10		345397	12/03/20 16:35	ASJ	TAL SEA	
Total/NA	Analysis	8260D		1	345537	12/11/20 21:12	CJB	TAL SEA	
Total/NA	Prep	3546			344832	12/04/20 15:42	S1S	TAL SEA	
Total/NA	Analysis	8270E		1	344983	12/08/20 16:34	W1T	TAL SEA	
Total/NA	Prep	5035			344970	12/07/20 16:09	JSM	TAL SEA	
Total/NA	Analysis	NWTPH-Gx		1	345040	12/08/20 09:30	JSM	TAL SEA	
Total/NA	Prep	3546			344824	12/04/20 13:02	S1S	TAL SEA	
Total/NA	Analysis	NWTPH-Dx		1	344993	12/07/20 21:03	ADB	TAL SEA	
Total/NA	Prep	3050B			345245	12/10/20 11:47	JCP	TAL SEA	
Total/NA	Analysis	6010D		1	345469	12/11/20 17:08	тмн	TAL SEA	
Total/NA	Prep	7471A			345362	12/11/20 12:16	JCP	TAL SEA	
Total/NA	Analysis	7471A		1	345462	12/11/20 17:15	FCW	TAL SEA	

Client Sample ID: High Top Solar B-REC-2B Date Collected: 11/30/20 00:00

Date Received: 12/03/20 15:47

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	2540G		1	344957	12/07/20 14:48	NRS	TAL SEA	

Client Sample ID: High Top Solar B-REC-2B Date Collected: 11/30/20 00:00 Date Received: 12/03/20 15:47

Lab Sample ID: 580-99489-2 Matrix: Solid Percent Solids: 88.8

Lab Sample ID: 580-99489-2

Matrix: Solid

Ргер Туре	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			345397	12/03/20 16:35	ASJ	TAL SEA
Total/NA	Analysis	8260D		1	345537	12/11/20 21:38	CJB	TAL SEA
Total/NA	Prep	3546			344832	12/04/20 15:42	S1S	TAL SEA
Total/NA	Analysis	8270E		1	344983	12/08/20 17:43	W1T	TAL SEA
Total/NA	Prep	5035			344970	12/07/20 16:09	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345040	12/08/20 09:54	JSM	TAL SEA
Total/NA	Prep	3546			344824	12/04/20 13:02	S1S	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	344993	12/07/20 21:23	ADB	TAL SEA
Total/NA	Prep	3050B			345245	12/10/20 11:47	JCP	TAL SEA
Total/NA	Analysis	6010D		1	345469	12/11/20 17:11	тмн	TAL SEA
Total/NA	Prep	7471A			345362	12/11/20 12:16	JCP	TAL SEA
Total/NA	Analysis	7471A		1	345462	12/11/20 17:24	FCW	TAL SEA

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Laboratory References:

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TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

.72

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

100 C			
Authority	Program	Identification Number	Expiration Date
Washington	State	C553	02-18-21
washington	Otate	0000	02 10 21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
2540G		Solid	Percent Moisture	
2540G		Solid	Percent Solids	

Sample Summary

Client: Cascade Analytical Inc Project/Site: ANS Geo Inc

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-99489-1	High Top Solar B-REC-2A	Solid	11/30/20 00:00	12/03/20 15:47	
580-99489-2	High Top Solar B-REC-2B	Solid	11/30/20 00:00	12/03/20 15:47	

Eurofins TestAmerica, Seattle

12/17/2020

5755 8th Street East

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

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in the second
Tacoma, WA 98424 nhone 253 922 2310 fax 253 922 5047

phone 253.922.2310 fax 253.922.5047														_							TestAmerica Labora	tories, Inc.
Client Contact	Project Manager: Andy Schut						Site Contact:							12/2/2020								
Eurofins Cascade Analytical Inc	509-452-7707					Andy Schut UPS						UPS						ł	Page 1 of 1	\$		
1008 W. Ahtanum Rd Ste #2	Analysis Turnaround Time																			ŀ	Job No.	d
Union Gap, WA 98903	Calendar (C) or Work Days (W)							2													99/20	
509-452-7707	TAT if different from Below							Aeta										Ι.			1409	•
509-452-7773		2	weeks					19												19	SDG No.	
Project Name: ANS Geo Inc		1	week																			
Site:		2	days			2		WW										1.8				
PO # 16810		1	day	-		Iding														L		
Sample Identification	Sample Date	Sample Tíme	Sample Type	Matrix	# of Cont.	Filtered S.	VUC 8260D SIM	SVOC 8270C SIM NWTPH Dx, Gx MTCA-5 Metaks													Sample Specific	Notes:
High Top Solar B-REC-2A	11/30/20	12:00		MS	4	X	x	x												2	0-C025478	
High Top Solar B-REC-2B	11/30/20	12:15		MS	4	X	: x	x												2	0-C025479	
							l	L					herm	ID:	42		2	3	• T	ne:	4.2.	
							Cooler Packin					ooler	n. ID: A2 Cor: 3 ° Und r Dsc: STMAD FedEx: ng: UPS: 6 Seal: Yes No Lab Con									
																		PS:	6	rund		
	51									Ice, Wet, Dry, None Other:_												
	580-99489 Chain of Custody																					
Preservation Used: I= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaC Possible Hazard Identification)H; 6= Other					_																
Non-Hazard Flammable Skin Irritant	Poison l	3 🗔	Unknown			1		Retu	irn To) Clie	nt			ispos	al By	Lab	[etain Arch		onger than 1 month) ^c or Monti	
Special Instructions/QC Requirements & Comments: No Method							~		estin	nated	l valu	ie (J i	flag)	dowr	to th	e MI	DL.					
Relinquished by: 5 James King	Company: Eurostim	s Cascade	-UE	Date/Tin	16:30		1)	1	2						Com	oany:	2				ate/Time:	1547
Relinquished by:	Company:			Date/Tin	ae;		cliv	ed by	:						Com	bany:	4.0				ate/Time:	
Relinguished by:	Company:			Date/Tin	ne:	Re	ceiv	ed by	:						Com	any:	nin				ate/Time:	

Login Sample Receipt Checklist

Client: Cascade Analytical Inc

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Job Number: 580-99489-1

the set that the set of the set

Login Number: 99489 List Number: 1 Creator: Blankinship, Tom X		List Source: Eurofins TestAmerica, Seat				
Question	Answer	Comment				
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True					
The cooler's custody seal, if present, is intact.	True					
Sample custody seals, if present, are intact.	True					
The cooler or samples do not appear to have been compromised or tampered with.	True					
Samples were received on ice.	True					
Cooler Temperature is acceptable.	True					
Cooler Temperature is recorded.	True					
COC is present.	True					
COC is filled out in ink and legible.	True					
COC is filled out with all pertinent information.	True					
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.				
There are no discrepancies between the containers received and the COC.	True					
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Refer to Job Narrative for details.				
Sample containers have legible labels.	True					
Containers are not broken or leaking.	True					
Sample collection date/times are provided.	True					
Appropriate sample containers are used.	True					
Sample bottles are completely filled.	True					
Sample Preservation Verified.	N/A					
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True					
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A					
Multiphasic samples are not present.	True					
Samples do not require splitting or compositing.	True					
Residual Chlorine Checked.	N/A					

TP-01 & TP-24

ENVIRONMENTAL RESULTS

CASCADE ANALY A EUROFINS COMP 1-800-545-420	A N Y	Road 801 Batch: Ø170 Client: ANS 3 Account: 2180	Geo Inc	
	Analytical	Servic		
ANS Geo Inc	2		Report Date: 12/23/20	0
	nton Ave #225 nfield, NJ 07080			
Sample Iden	Number: 20-C025780 htification: High Top		Date Received: 12/ 7/20 Date Sampled: 12/ 3/20	
Test Requested	Results Units	RL Method	Date Analyzed Flags	-
Other Analysis	Analyzed by TAL/S		12/22/20	
Approved By Name:	Andy Schut Lab Manager/Yakima	Signature:	aft	
Function:			l	
makes no warranty of any b only to the items tested a client as a result of use Eurofins-Cascade Analytica	al uses procedures established by EPA, kind. The client assumes all risk and and the sample(s) as received by the B of the test results shall be limited al for analysis. PLEASE REVIEW YOUR DA CONSIBILITY. THOUGH WE DO KEEP ALL ANN	liability from the use o laboratory. Eurofins-Casc to a sum equal to the fe ATA IN A TIMELY MANNER. D	f these results. Results relate ade Analytical liability to the es paid by the client to ATA GAPS OR ERRORS AFTER ONE	
	Page: 1 of	1		

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CASCADE ANALYTI A EUROFINS COMPAN 1-800-545-4206	Officit Cap, WA COUCO	Batch: 017 Client: ANS Account: 218	Geo Inc	
	Analytical	Servic		
ANS Geo Inc			Report Date: 12/23/2	20
	ield, NJ 07080			
Sample Ident	umber: 20-C025781 ification: High Top Sc e Comment: 1'-2'		Date Received: 12/ 7/2 Date Sampled: 12/ 3/2	
Test Requested	Results Units RL	Method	Date Analyzed Flags	
Other Analysis	Analyzed by TAL/S		12/22/20	
Approved By Name: Function:	Andy Schut Lab Manager/Yakima	Signature:	aft	
makes no warranty of any kind only to the items tested and client as a result of use of Eurofins-Cascade Analytical	uses procedures established by EPA, A d. The client assumes all risk and lin the sample(s) as received by the lab the test results shall be limited to for analysis. PLEASE REVIEW YOUR DATA SIBILITY. THOUGH WE DO KEEP ALL ANALY	ability from the use o oratory. Eurofins-Casc a sum equal to the fe IN A TIMELY MANNER. D	f these results. Results relate ade Analytical liability to the es paid by the client to ATA GAPS OR ERRORS AFTER ONE	
	Page: 1 of	1		

CASCADE ANALY A EUROFINS COMP 1-800-545-420		Batch: 017 Batch: 017 Client: ANS Account: 218 03 Sampler: PO Number:	300 300	
	Analytical	Servic		
ANS Geo Inc			Report Date: 12/23/2	20
South Plain Laboratory	ton Ave #225 field, NJ 07080 Number: 20-C025782 tification: High Top S		Date Received: 12/ 7/2 Date Sampled: 12/ 3/2	
Sample Iden	le Comment: 1'-2'			
				101.4
Test Requested	Results Units	RL Method	Date Analyzed Flags	
Other Analysis	Analyzed by TAL/		12/22/20	
Approved By Name:	Andy Schut Lab Manager/Yakima	Signature:	att	
Function:			1	
makes no warranty of any k only to the items tested a	l uses procedures established by EPA, ind. The client assumes all risk and nd the sample(s) as received by the l of the test results shall be limited	liability from the use aboratory. Eurofins-Case	of these results. Results relate cade Analytical liability to the	

Eurofins-Cascade Analytical for analysis. PLEASE REVIEW YOUR DATA IN A TIMELY MANNER. DATA GAPS OR ERRORS AFTER ONE MONTH WILL NOT BE OUR RESPONSIBILITY. THOUGH WE DO KEEP ALL ANALYTICAL DATA FOR SEVERAL YEARS, SAMPLES ARE DISPOSED OF AFTER SIX WEEKS.

Page: 1 of 1

CASCADE ANALY A EUROFINS COMP 1-800-545-420	ANY P	¹ Batch: 017 Client: ANS Account: 218	Geo Inc
	Analytical	Servic	
	r nton Ave #225 nfield, NJ 07080		Report Date: 12/23/20
Sample Iden	Number: 20-C025783 ntification: High Top S ple Comment: 1'-2'		Date Received: 12/ 7/20 Date Sampled: 12/ 3/20
Test Requested	Results Units R	L Method	Date Analyzed Flags
Other Analysis	Analyzed by TAL/S		12/22/20
Approved By Name: Function:	Andy Schut Lab Manager/Yakima	Signature:	att
makes no warranty of any only to the items tested client as a result of use Eurofins-Cascade Analytic	al uses procedures established by EPA, A kind. The client assumes all risk and li and the sample(s) as received by the la of the test results shall be limited to al for analysis. PLEASE REVIEW YOUR DATA PONSIBILITY. THOUGH WE DO KEEP ALL ANALY	iability from the use (boratory. Eurofins-Case o a sum equal to the f(A IN A TIMELY MANNER. I	of these results. Results relate cade Analytical liability to the ees paid by the client to DATA GAPS OR ERRORS AFTER ONE

Page: 1 of 1

🚯 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

Laboratory Job ID: 580-99593-1 Client Project/Site: ANS Geo

For:

..... LINKS

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Ask-

The

Expert

Cascade Analytical Inc 1008 W. Ahtanum Rd. Union Gap, Washington 98903

Attn: Andy Schut

Authorized for release by: 12/22/2020 5:13:08 PM

Pauline Matlock, Project Manager (253)922-2310 pauline.matlock@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 580-99593-1

Job ID: 580-99593-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

#

Job Narrative 580-99593-1

Comments

No additional comments.

Receipt

The samples were received on 12/8/2020 2:44 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.2° C.

GC/MS VOA

Method 8260D: The method blank for preparation batch 345397 and analytical batch 345537 contained Naphthalene above the Method Detection Limit (MDL), but below the Reporting Limit (RL). Data has been qualified and reported.

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-345397 and analytical batch 580-345537 recovered outside control limits for the following analytes: Dichlorodifluoromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-345537 recovered above the upper control limit for Bromomethane, Chloroethane, Dichlorodifluoromethane, 1,1-Dichloroethene, Chloromethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 580-345537/3).

Method 8260D: The associated CCVIS meets control criteria; 20.1% rounds to 20%. Data is reported. (CCVIS 580-346000/3)

Method 8260D: The laboratory control sample (LCS) for preparation batch 580-346011 and analytical batch 580-346000 recovered outside acceptance limits for m-Xylene & p-Xylene (LCS 78, LCSD 77, limit 80-132). There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported. Sample is ND.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-346011 and analytical batch 580-346000 recovered outside control limits for the following analytes: Methylene Chloride.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-346000 recovered outside acceptance criteria, low biased, for m-Xylene & p-Xylene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8260D: Surrogate recovery for the following samples were outside control limits: 20-C025780 (580-99593-1), 20-C025781 (580-99593-2) and 20-C025782 (580-99593-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270E: The method blank for preparation batch 580-345599 and analytical batch 580-345700 contained 2-Methylnaphthalene, Phenanthrene, Anthracene and 1-Methylnaphthalene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method 8270E: The method blank for preparation batch 580-345599 contained Naphthalene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 8270E: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 580-345599 and analytical batch 580-345700 recovered outside control limits for the following analyte(s): 2,4-Dinitrophenol and 4-Chloroaniline. These have been identified as a poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for 2,4-Dinitrophenol. These results have been

Job ID: 580-99593-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

qualified and reported.

Method 8270E: The following analytes have been identified, in the reference method and/or via historical data, to be poor and/or erratic performers: 2,4-Dinitrophenol. This analyte may have a %D >50%.

Method 8270E: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 580-345599 and analytical batch 580-345700: Benzo[g,h,i]perylene and 2,2'-oxybis[1-chloropropane]. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-345700 was outside criteria for the following analyte(s): N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270E: Surrogate recovery for the following sample was outside control limits: 20-C025780 (580-99593-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E: The continuing calibration verification (CCV) associated with batch 580-345574 recovered above the upper control limit for Benzo[a]anthracene, Bis(2-ethylhexyl)phthalate, Butyl benzyl phthalate and Benzoic acid. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 20-C025781 (580-99593-2), 20-C025782 (580-99593-3) and (CCVIS 580-345574/3).

Method 8270E: The following continuing calibration verification (CCV) standard associated with batch 580-345574 recovered outside acceptance criteria for %D for surrogate 2,4,6-Tribromophenol. Since all the other surrogates was within %D criteria; therefore, the data have been reported. (CCVIS 580-345574/3)

Method 8270E: The continuing calibration verification (CCV) associated with batch 580-345574 recovered outside acceptance criteria, low biased, for 2,2'-oxybis[1-chloropropane]. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-345574 was outside criteria for the following analyte(s): N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

Method 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: 20-C025780 (580-99593-1), 20-C025781 (580-99593-2), 20-C025782 (580-99593-3) and 20-C025783 (580-99593-4). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was below this range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 580-99593-1

Qualifiers

1 9

Qualifiers	
GC/MS VOA	
Qualifier	Qualifier Description
*	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
5 S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
GC/MS Semi	VOA
Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
GC Semi VO	
Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
гı J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals	
Qualifier	Qualifier Description Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
J	
Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
a	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)

- Negative / Absent NEG
- Positive / Present POS
- Practical Quantitation Limit PQL
- Presumptive PRES

- Color

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: Cascade Analytical Inc Project/Site: ANS Geo

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Job ID: 580-99593-1

Lab Sample ID: 580-99593-1 Matrix: Solid

Matrix: Solid Percent Solids: 94.8

Client Sample ID: 20-C025780 Date Collected: 12/07/20 12:30 Date Received: 12/08/20 14:44

Analyte	ganic Compounds by GC/ Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND *+	2.4	0.58	ug/Kg	\$	12/08/20 15:00	12/11/20 22:03	
Chloromethane	ND	5.9	1.1	ug/Kg	\$	12/08/20 15:00	12/11/20 22:03	
Vinyl chloride	ND	2.4	0.35	ug/Kg	¢	12/08/20 15:00		
Bromomethane	ND	1.2	0.25	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Chloroethane	ND	12	0.88	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Trichlorofluoromethane	ND	2.4	0.35	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
1,1-Dichloroethene	ND	5.9	1.3	ug/Kg	₽	12/08/20 15:00	12/11/20 22:03	
Methylene Chloride	ND	47	12	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
trans-1.2-Dichloroethene	ND	2.4	0.47	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
1,1-Dichloroethane	ND	1.2	0.22	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	00044103
2,2-Dichloropropane	ND	5.9		ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
cis-1.2-Dichloroethene	ND	3.5		ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Bromochloromethane	ND	2.4		ug/Kg		12/08/20 15:00		
Chloroform	ND	2.4		ug/Kg		12/08/20 15:00		
1,1,1-Trichloroethane	ND	2.4		ug/Kg		12/08/20 15:00		
Carbon tetrachloride	ND	2,4		ug/Kg		12/08/20 15:00	A REPORT OF A R	
	ND	2,4		ug/Kg	¢	12/08/20 15:00		
1,1-Dichloropropene	ND	2.4		ug/Kg		12/08/20 15:00	12/11/20 22:03	
Benzene	ND	1.2	· Weinstein wirden in	ug/Kg		12/08/20 15:00		
1,2-Dichloroethane	ND	2.4		ug/Kg		12/08/20 15:00		
Trichloroethene	ND	2.4		ug/Kg		12/08/20 15:00		
1,2-Dichloropropane	and a second	1.2		ug/Kg		12/08/20 15:00		1
Dibromomethane	ND	1.2		_		12/08/20 15:00		
Bromodichloromethane	ND			ug/Kg		12/08/20 15:00		
cis-1,3-Dichloropropene	ND	1.2		ug/Kg		12/08/20 15:00	the state of the s	
Toluene	ND	12		ug/Kg		12/08/20 15:00		
trans-1,3-Dichloropropene	ND	12		0 0	¢	12/08/20 15:00		
1,1,2-Trichloroethane	ND	2.4		ug/Kg		12/08/20 15:00		
Tetrachloroethene	ND	2.4		ug/Kg				
1,3-Dichloropropane	ND	2.4		ug/Kg		12/08/20 15:00		
Dibromochloromethane	ND	1.8		ug/Kg		12/08/20 15:00		
1,2-Dibromoethane	ND	1.2		ug/Kg		12/08/20 15:00		
Chlorobenzene	ND	2.4		ug/Kg		12/08/20 15:00		
Ethylbenzene	ND	2.4		ug/Kg		12/08/20 15:00		
1,1,1,2-Tetrachloroethane	ND	3.5	0.69	ug/Kg	¢	12/08/20 15:00		
1,1,2,2-Tetrachloroethane	ND	4.7	1.1	ug/Kg	¢	12/08/20 15:00		
m-Xylene & p-Xylene	ND	12	0.66	ug/Kg		12/08/20 15:00		
o-Xylene	ND	5.9	1.1	ug/Kg	¢	12/08/20 15:00		
Styrene	ND	3.5	0.87	ug/Kg	¢	12/08/20 15:00		
Bromoform	ND	5.9	0.99	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Isopropylbenzene	ND	2.4	0.54	ug/Kg	¢	12/08/20 15:00		
Bromobenzene	ND	12	1.2	ug/Kg	₽	12/08/20 15:00	12/11/20 22:03	
N-Propylbenzene	ND	5.9	0.89	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
1,2,3-Trichloropropane	ND	5.9	1.2	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
2-Chlorotoluene	ND	5.9	1.1	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
1,3,5-Trimethylbenzene	ND	5.9		ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
4-Chlorotoluene	ND	5.9		ug/Kg		12/08/20 15:00	12/11/20 22:03	
t-Butylbenzene	ND	3.5		ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
1,2,4-Trimethylbenzene	ND	5.9		ug/Kg	₽	12/08/20 15:00	12/11/20 22:03	
sec-Butylbenzene	ND	3.5		ug/Kg		12/08/20 15:00		

Client Sample ID: 20-C025780 Date Collected: 12/07/20 12:30 Date Received: 12/08/20 14:44

Lab Sample ID: 580-99593-1 Matrix: Solid

Percent Solids: 94.8

Analyte		Qualifier	RL		Unit	<u>D</u>	Prepared		Dil Fa
1,3-Dichlorobenzene	ND		5.9	1.3	ug/Kg	☆	12/08/20 15:00	12/11/20 22:03	
4-Isopropyltoluene	ND		2.4	0.47	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	25.7 Lana
1,4-Dichlorobenzene	ND		5.9		0 0	¢	12/08/20 15:00	12/11/20 22:03	
n-Butylbenzene	ND		3.5	0.74	ug/Kg	₽	12/08/20 15:00	12/11/20 22:03	
1,2-Dichlorobenzene	ND		12	1.5	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
1,2-Dibromo-3-Chloropropane	ND		12	1.9	ug/Kg	☆	12/08/20 15:00	12/11/20 22:03	
1,2,4-Trichlorobenzene	ND		2.4	0.49	ug/Kg	₽	12/08/20 15:00	12/11/20 22:03	
1,2,3-Trichlorobenzene	ND		3.5	0.71	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Hexachlorobutadiene	ND		3.5	0.71	ug/Kg	₽	12/08/20 15:00	12/11/20 22:03	
Naphthalene	41	В	12	2.1	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Methyl tert-butyl ether	ND		2.4	0.35	ug/Kg	¢	12/08/20 15:00	12/11/20 22:03	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Toluene-d8 (Surr)	120		80 - 120				12/08/20 15:00	12/11/20 22:03	
4-Bromofluorobenzene (Surr)	109		80 - 120				12/08/20 15:00	12/11/20 22:03	
Dibromofluoromethane (Surr)	63	S1-	80-120				12/08/20 15:00	12/11/20 22:03	
1,2-Dich/oroethane-d4 (Surr)	86		80 - 121				12/08/20 15:00	12/11/20 22:03	
Method: 8270E - Semivolati	ile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Phenol	ND		150	23	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	
3is(2-chloroethyl)ether	ND		99	7.6	ug/Kg	☆	12/11/20 15:17	12/15/20 18:39	
2-Chlorophenol	ND		200	4.0	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
1,3-Dichlorobenzene	ND		49	4.7	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	
1,4-Dichlorobenzene	ND		49	8.2	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	
Benzyl alcohol	ND		990	49	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	
1,2-Dichlorobenzene	ND		49	4.9	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
2-Methylphenol	ND		150	9.7	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
3 & 4 Methylphenol	ND		200	15	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
N-Nitrosodi-n-propylamine	ND		200	22	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	
Hexachloroethane	ND		150	4.2	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
Nitrobenzene	ND		200	20	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
Isophorone	ND		150	8.3	ug/Kg	☆	12/11/20 15:17	12/15/20 18:39	
2-Nitrophenol	ND		200	6.1	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	
2,4-Dimethylphenol	ND		200	59	ug/Kg	☆	12/11/20 15:17	12/15/20 18:39	
Benzoic acid	ND		4000	1200	ug/Kg		12/11/20 15:17	12/15/20 18:39	
Bis(2-chloroethoxy)methane	ND		200	18	ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
2,4-Dichlorophenol	ND		200		ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
1,2,4-Trichlorobenzene	ND		49		ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
Naphthalene	ND		25		ug/Kg	₽	12/11/20 15:17	12/15/20 18:39	
4-Chloroaniline	ND		1500	130	ug/Kg	⇔	12/11/20 15:17	12/15/20 18:39	
Hexachlorobutadiene	ND		49		ug/Kg	☆		12/15/20 18:39	
4-Chloro-3-methylphenol	ND		150	33	ug/Kg	₽		12/15/20 18:39	
2-Methylnaphthalene	ND		49		ug/Kg	¢	12/11/20 15:17		
Hexachlorocyclopentadiene	ND		99		ug/Kg	₽	والمتحج والمتحج والمراجع	12/15/20 18:39	
2,4,6-Trichlorophenol	ND		150		ug/Kg	₽		12/15/20 18:39	
2,4,5-Trichlorophenol	ND		200		ug/Kg ug/Kg	¢.		12/15/20 18:39	
					ug/Kg ug/Kg			12/15/20 18:39	
2-Chloronaphthalene	ND		25			¢ ×		12/15/20 18:39	
2-Nitroaniline Dimethyl phthalate	ND ND		99 150		ug/Kg ug/Kg	×		12/15/20 18:39	

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Job ID: 580-99593-1

Percent Solids: 94.8

Matrix: Solid

Lab Sample ID: 580-99593-1

Client Sample ID: 20-C025780

Date Collected: 12/07/20 12:30 Date Received: 12/08/20 14:44

Method: 8270E - Semivolatile Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		25	4.9	ug/Kg	¤	12/11/20 15:17	12/15/20 18:39	1
2.6-Dinitrotoluene	ND		150		ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
3-Nitroaniline	ND		300		ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
Acenaphthene	ND		40		ug/Kg	\$	12/11/20 15:17	12/15/20 18:39	1
2,4-Dinitrophenol	ND	*_	2000	580	ug/Kg	₩	12/11/20 15:17	12/15/20 18:39	1
4-Nitrophenol	ND		2000	170	ug/Kg	æ	12/11/20 15:17	12/15/20 18:39	1
Dibenzofuran	ND		150	5.8	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
2,4-Dinitrotoluene	ND		200	42	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
Diethyl phthalate	ND		400	22	ug/Kg	æ		12/15/20 18:39	1
	ND		200		ug/Kg			12/15/20 18:39	1.
4-Chlorophenyl phenyl ether	ND		250	4.9	ug/Kg	æ		12/15/20 18:39	1
	ND		150		ug/Kg	æ		12/15/20 18:39	1
4-Nitroaniline		Cover more	990	99	ug/Kg			12/15/20 18:39	PAGE 221
4,6-Dinitro-2-methylphenol	ND		59	99 7.9	ug/Kg ug/Kg	×		12/15/20 18:39	. 1
N-Nitrosodiphenylamine	ND			7.9 9.0	ug/Kg ug/Kg	×		12/15/20 18:39	1
4-Bromophenyl phenyl ether	ND		200 49		ug/Kg ug/Kg	÷		12/15/20 18:39	1
Hexachlorobenzene	ND							12/15/20 18:39	1
Pentachlorophenol	ND		400	62	ug/Kg	\$ \$		12/15/20 18:39	1
Phenanthrene	ND	1000000	59	5.7	ug/Kg			12/15/20 18:39	····-
Anthracene	ND		59	16	ug/Kg	×		12/15/20 18:39	1
Di-n-butyl phthalate	ND		490	27	ug/Kg	¢			1
Fluoranthene	ND		40	CONTRACTOR SEA	ug/Kg	æ		12/15/20 18:39	1000
Pyrene	ND		59		ug/Kg	×		12/15/20 18:39	1
Butyl benzyl phthalate	ND		200	50	ug/Kg	æ		12/15/20 18:39	1
3,3'-Dichlorobenzidine	ND		400		ug/Kg	¢		12/15/20 18:39	1
Benzo[a]anthracene	ND		40	11	ug/Kg	¢		12/15/20 18:39	1
Chrysene	ND		59	13	ug/Kg	¢		12/15/20 18:39	1
Bis(2-ethylhexyl) phthalate	ND		590	70	ug/Kg	×.		12/15/20 18:39	1
Di-n-octyl phthalate	ND		150	12	ug/Kg	Þ	12/11/20 15:17	12/15/20 18:39	1
Benzo[a]pyrene	ND		59	13	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
Indeno[1,2,3-cd]pyrene	ND		40	12	ug/Kg	æ	12/11/20 15:17	12/15/20 18:39	1
Dibenz(a,h)anthracene	ND		49	12	ug/Kg	¢		12/15/20 18:39	1
Benzo[g,h,i]perylene	ND		59	18	ug/Kg	×	12/11/20 15:17	12/15/20 18:39	1
Carbazole	ND		150	7.2	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
1-Methylnaphthalene	ND		30	4.9	ug/Kg	¢	12/11/20 15:17	12/15/20 18:39	1
Benzo[b]fluoranthene	ND		40	9.9	ug/Kg	æ	12/11/20 15:17	12/15/20 18:39	1
Benzo[k]fluoranthene	ND		59	14	ug/Kg	₩	12/11/20 15:17	12/15/20 18:39	1
bis(chloroisopropyl) ether	ND	*_	200		ug/Kg	×	12/11/20 15:17	12/15/20 18:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	66		47 - 119					12/15/20 18:39	1
Phenol-d5 (Surr)	53	S1-	59 - 120					12/15/20 18:39	1
Nitrobenzene-d5 (Surr)	75		54 - 120					12/15/20 18:39	1
2-Fluorobiphenyl	68		57 - 120					12/15/20 18:39	1
2,4,6-Tribromophenol (Surr)	73		52 <u>- 11</u> 5				12/11/20 15:17	12/15/20 18:39	1
			30 (05				12/11/20 15.17	12/15/20 18:39	1
Terphenyl-d14 (Surr)	85		73 - 125				12/1//20 13:17	1210/2010.00	

meun	JU, NWITTI-OX - NORTHWEST - VOIGH		1100000						
Analy	e Resu	t Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoli	ne N	<u> </u>	13	6.0	mg/Kg	¢	12/10/20 09:15	12/10/20 12:30	1

Job ID: 580-99593-1

Client Sample ID: 20-C025780 Pate Collected: 12/07/20 12:30							Lab Sample ID: 580-99593- Matrix: Solic					
ate Received: 12/08/20 14:	44							Percent Solid	s: 94.8			
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	<i>Dil F</i> a			
4-Bromofluorobenzene (Surr)	96		50 - 150				12/10/20 09:15	12/10/20 12:30				
Method: NWTPH-Dx - Norti	hwest - Semi-V	olatile Pet	roleum Proc	lucts (GC	2)							
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa			
#2 Diesel (C10-C24)	ND		49	12	mg/Kg	¢	12/21/20 08:35	12/21/20 22:14				
Motor Oil (>C24-C36)	29	J	49	17	mg/Kg	¢	12/21/20 08:35	12/21/20 22:14				
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	<i>Dil F</i> a			
o-Terphenyl	80		50 - 150				12/21/20 08:35	12/21/20 22:14				
Method: 6020B - Metals (IC Analyte	,	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa			
Lead	9.0		0.39	0.037	mg/Kg	¢	12/17/20 12:22	12/18/20 12:11	1			
Cadmium	0.11	J	0.62	0.059	mg/Kg	☆	12/17/20 12:22	12/18/20 12:11	1			
Arsenic	6.2		0.39	0.077	mg/Kg	¢	12/17/20 12:22	12/18/20 12:11	1			
Chromium	26		0.77	0.049	mg/Kg	¢	12/17/20 12:22	12/18/20 12:11	1			
Method: 7471A - Mercury (
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa			
Mercury	0.022		0.022	0.0065	mg/Kg	¢.	12/14/20 13:46	12/15/20 11:59				
General Chemistry												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa			
Percent Solids	94.8		0.1	0.1	%			12/09/20 15:39				

Client: Cascade Analytical Inc Project/Site: ANS Geo

e 7

Client Sample ID: 20-C025781

Date Collected: 12/07/20 08:30 Date Received: 12/08/20 14:44

Job ID: 580-99593-	1	
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Lab Sample ID: 580-99593-2 Matrix: Solid

Percent Solids: 93.9

Analyte	rganic Compounds by GC/l Result Qualifier	RL	MDL	Unit	Ď	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND *+	2.4	0.59	ug/Kg	\$	12/08/20 15:00	12/11/20 22:29	
Chloromethane	ND	6.0	1.1	ug/Kg	⋫	12/08/20 15:00	12/11/20 22:29	
Vinyl chloride	ND	2.4	0.36	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Bromomethane	ND	1.2	0.25	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Chloroethane	ND	12	0.90	ug/Kg	☆	12/08/20 15:00	12/11/20 22:29	·
Trichlorofluoromethane	ND	2,4	0.36	ug/Kg	☆	12/08/20 15:00	12/11/20 22:29	
1,1-Dichloroethene	ND	6.0	1.3	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Methylene Chloride	ND	48	12	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
trans-1,2-Dichloroethene	ND	2.4	0.48	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
1,1-Dichloroethane	ND	1.2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
2,2-Dichloropropane	ND	6.0		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
cis-1,2-Dichloroethene	ND	3.6		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Bromochloromethane	ND	2.4	CONTRACTOR -	ug/Kg	¢.	12/08/20 15:00	12/11/20 22:29	
	ND	2.4		ug/Kg			12/11/20 22:29	
Chloroform	ND	2.4		ug/Kg			12/11/20 22:29	
1,1,1-Trichloroethane Carbon tetrachloride	ND	2.4		ug/Kg			12/11/20 22:29	
	ND	2.4		ug/Kg	¢		12/11/20 22:29	
1,1-Dichloropropene	ND	2.4		ug/Kg			12/11/20 22:29	
Benzene	ND	1.2		ug/Kg			12/11/20 22:29	
1,2-Dichloroethane	ND	2.4		ug/Kg			12/11/20 22:29	
Trichloroethene	ND	2.4		ug/Kg			12/11/20 22:29	
1,2-Dichloropropane	- AND DECEMBER OF A LOCAL DEPENDENCE OF A DEPE	1.2		ug/Kg			12/11/20 22:29	
Dibromomethane	ND	1.2		ug/Kg ug/Kg	¢.	12/08/20 15:00	12/11/20 22:29	
Bromodichloromethane	ND	1.2		ug/Kg ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
cis-1,3-Dichloropropene	ND	1.2					12/11/20 22:29	
Toluene	ND			ug/Kg	¢.	12/08/20 15:00	12/11/20 22:29	
trans-1,3-Dichloropropene	ND	12	0.72	ug/Kg		12/08/20 15:00	12/11/20 22:29	
1,1,2-Trichloroethane	ND	2.4	0.30	ug/Kg		12/08/20 15:00	12/11/20 22:29	
Tetrachloroethene	ND	2.4		ug/Kg			12/11/20 22:29	
1,3-Dichloropropane	ND	2.4	0.28	ug/Kg	Å.	12/08/20 15:00 12/08/20 15:00		
Dibromochloromethane	ND	1.8		ug/Kg		12/08/20 15:00		
1,2-Dibromoethane	ND	1.2		ug/Kg				
Chlorobenzene	ND	2.4	0.30	ug/Kg	÷.	12/08/20 15:00	12/11/20 22:29	
Ethylbenzene	ND	2.4		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
1,1,1,2-Tetrachloroethane	ND	3.6	0.71	ug/Kg	¢.	12/08/20 15:00	12/11/20 22:29	
1,1,2,2-Tetrachloroethane	ND	4.8	1.1	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
m-Xylene & p-Xylene	ND	12		ug/Kg			12/11/20 22:29	• 633315
o-Xylene	ND	6.0		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Styrene	ND	3.6		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Bromoform	ND	6.0		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
Isopropylbenzene	ND	2.4	0.55	ug/Kg	¢		12/11/20 22:29	
Bromobenzene	ND	12	1.2	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
N-Propylbenzene	ND	6.0	0.91	ug/Kg	₽.	12/08/20 15:00	12/11/20 22:29	
1,2,3-Trichloropropane	ND	6.0	1.2	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
2-Chlorotoluene	ND	6.0	1.1	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
1,3,5-Trimethylbenzene	ND	6.0	0.97	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
4-Chlorotoluene	ND	6.0	1.2	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
t-Butylbenzene	ND	3.6		ug/Kg	×	12/08/20 15:00	12/11/20 22:29	
1,2,4-Trimethylbenzene	ND	6.0		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	
sec-Butylbenzene	ND	3.6	1.1.1.1.1.1.1.1.1	ug/Kg	₽	12/08/20 15:00	12/11/20 22:29	

Client Sample ID: 20-C025781 Date Collected: 12/07/20 08:30 Date Received: 12/08/20 14:44

Lab Sample ID: 580-99593-2

Matrix: Solid Percent Solids: 93.9

Method: 8260D - Volatile O Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND	-	6.0	1.3	ug/Kg		12/08/20 15:00	12/11/20 22:29	1
4-Isopropyltoluene	ND		2.4	0.48	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	1
1,4-Dichlorobenzene	ND		6.0	1.2	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	1
n-Butylbenzene	ND		3.6	0.76	ug/Kg	₽	12/08/20 15:00	12/11/20 22:29	1
1,2-Dichlorobenzene	ND		12	1.6	ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	1
1,2-Dibromo-3-Chloropropane	ND		12			₽	12/08/20 15:00	12/11/20 22:29	1
1,2,4-Trichlorobenzene	ND		2.4	0.50		₽	12/08/20 15:00	12/11/20 22:29	1
1.2.3-Trichlorobenzene	ND		3.6		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	1
Hexachlorobutadiene	ND		3.6		ug/Kg		12/08/20 15:00	12/11/20 22:29	1
Naphthalene	9.1	JB	12		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	1
Methyl tert-butyl ether	ND		2.4		ug/Kg	¢	12/08/20 15:00	12/11/20 22:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	<i>Dil F</i> ac
Toluene-d8 (Surr)		S1+	80-120				12/08/20 15:00	12/11/20 22:29	1
4-Bromofluorobenzene (Surr)	720		80 - 120				12/08/20 15:00	12/11/20 22:29	1
Dibromofluoromethane (Surr)	73		80 - 120 80 - 120				12/08/20 15:00	12/11/20 22:29	1
		S1-	80 - 121				12/08/20 15:00	12/11/20 22:29	1
1,2-Dichloroethane-d4 (Surr)	32	31-	00-121				12/00/20 10.00	12/11/20 22.29	'
Method: 8270E - Semivolat						_			
Analyte		Qualifier	RL	MDL	-	D	Prepared	Analyzed	Dil Fac
Phenol	ND		160	24	ug/Kg	¢	12/11/20 15:17		1
Bis(2-chloroethyl)ether	ND		110	8.1	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
2-Chlorophenol	ND		210	4.2	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
1,3-Dichlorobenzene	ND		53	5.0	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
1,4-Dichlorobenzene	ND		53	8.7	ug/Kg	¢	12/11/20 15:17	12/15/20 19:02	1
Benzyl alcohol	ND		1100	53	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
1,2-Dichlorobenzene	ND		53	5.3	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
2-Methylphenol	ND		160	10	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
3 & 4 Methylphenol	ND		210	16	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
N-Nitrosodi-n-propylamine	ND		210	23	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
Hexachloroethane	ND		160	4.5	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
Nitrobenzene	ND		210	21	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
Isophorone	ND		160	8.8	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
2-Nitrophenol	ND		210	6.5	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
2,4-Dimethylphenol	ND		210	63	ug/Kg	₽	12/11/20 15:17	12/15/20 19:02	1
Benzoic acid	ND		4200		ug/Kg	\$	12/11/20 15:17	12/15/20 19:02	27 222
Bis(2-chloroethoxy)methane	ND		210		ug/Kg	☆	12/11/20 15:17	12/15/20 19:02	1
2,4-Dichlorophenol	ND		210		ug/Kg		12/11/20 15:17	12/15/20 19:02	1
1,2,4-Trichlorobenzene	ND		53		ug/Kg		12/11/20 15:17		1
Naphthalene	ND		26		ug/Kg	¢	12/11/20 15:17		1
4-Chloroaniline	ND		1600		ug/Kg	¢	12/11/20 15:17		1
Hexachlorobutadiene	ND		53		ug/Kg	¢	12/11/20 15:17		1
	ND		160		ug/Kg ug/Kg		12/11/20 15:17		1
4-Chloro-3-methylphenol			53			\$ ~	12/11/20 15:17		1
2-Methylnaphthalene	ND			in the filler second	ug/Kg				
Hexachlorocyclopentadiene	ND		110		ug/Kg		12/11/20 15:17		1
2,4,6-Trichlorophenol	ND		160		ug/Kg	\$	12/11/20 15:17		1
2,4,5-Trichlorophenol	ND		210		ug/Kg	\$	12/11/20 15:17		1
2-Chloronaphthalene	ND		26		ug/Kg		12/11/20 15:17		1
2-Nitroaniline	ND		110		ug/Kg		12/11/20 15:17		1
Dimethyl phthalate	ND		160	5.3	ug/Kg	¢	12/11/20 15:17	12/15/20 19:02	1

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Job ID: 580-99593-1

Percent Solids: 93.9

Matrix: Solid

Lab Sample ID: 580-99593-2

Client Sample ID: 20-C025781

Date Collected: 12/07/20 08:30 Date Received: 12/08/20 14:44

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		26	5.3	ug/Kg	¢		12/15/20 19:02	1
2,6-Dinitrotoluene	ND		160	16	ug/Kg	¢		12/15/20 19:02	1
3-Nitroaniline	ND		320	110	ug/Kg	×	12/11/20 15:17	12/15/20 19:02	1
Acenaphthene	ND		42	4.8	ug/Kg	\$	12/11/20 15:17	12/15/20 19:02	1
2,4-Dinitrophenol	ND	*_	2100	610	ug/Kg	¢		12/15/20 19:02	1
4-Nitrophenol	ND		2100	180	ug/Kg	¢	12/11/20 15:17	12/15/20 19:02	1
Dibenzofuran	ND		160	6.2	ug/Kg	\$	12/11/20 15:17	12/15/20 19:02	1
2,4-Dinitrotoluene	ND		210	45	ug/Kg	⇔	12/11/20 15:17	12/15/20 19:02	1
Diethyl phthalate	ND		420	23	ug/Kg	⇔	12/11/20 15:17	12/15/20 19:02	1
4-Chlorophenyl phenyl ether	ND		210	6.6	ug/Kg	¢	12/11/20 15:17	12/15/20 19:02	1
Fluorene	ND		26	5.3	ug/Kg	×	12/11/20 15:17	12/15/20 19:02	1
4-Nitroaniline	ND		160	53	ug/Kg	⇔	12/11/20 15:17	12/15/20 19:02	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	\$	12/11/20 15:17	12/15/20 19:02	1
N-Nitrosodiphenylamine	ND		63	8.4		\$	12/11/20 15:17	12/15/20 19:02	1
4-Bromophenyl phenyl ether	ND		210	9.6	ug/Kg	¢	12/11/20 15:17	12/15/20 19:02	1
Hexachlorobenzene	ND		53	16	ug/Kg	¢		12/15/20 19:02	1
Pentachlorophenol	ND		420	66	ug/Kg	×	12/11/20 15:17	12/15/20 19:02	1
Phenanthrene	ND		63	6.1		æ		12/15/20 19:02	1
Anthracene	ND		63	17				12/15/20 19:02	1 1
	ND		530	28		¢		12/15/20 19:02	1
Di-n-butyl phthalate	ND		42		ug/Kg	à		12/15/20 19:02	1
Fluoranthene	ND		63	14		× T		12/15/20 19:02	100000
Pyrene	ND		210	54		æ		12/15/20 19:02	1
Butyl benzyl phthalate	ND		420		ug/Kg	à		12/15/20 19:02	1
3,3'-Dichlorobenzidine			420		ug/Kg	æ		12/15/20 19:02	10
Benzo[a]anthracene	ND		63		-	¢		12/15/20 19:02	1
Chrysene	ND			14	_			12/15/20 19:02	1
Bis(2-ethylhexyl) phthalate	ND	• [1] [54 [54] [56] •	630	a) a set al 2 (a) a set al	ug/Kg	÷ ÷ ÷ ;;;		12/15/20 19:02	an ball
Di-n-octyl phthalate	ND		160		ug/Kg	¢		12/15/20 19:02	. 1
Benzo[a]pyrene	ND		63	14	ug/Kg	¢		12/15/20 19:02	1
Indeno[1,2,3-cd]pyrene	ND		42	13		*		12/15/20 19:02	
Dibenz(a,h)anthracene	ND		53	13	ug/Kg	¢.			1
Benzo[g,h,i]perylene	ND		63	19	ug/Kg	\$		12/15/20 19:02	
Carbazole	ND		160	7.7	ug/Kg	¢		12/15/20 19:02	1
1-Methylnaphthalene	ND		32	5.3		¢		12/15/20 19:02	1
Benzo[b]fluoranthene	ND		42	11	ug/Kg	×		12/15/20 19:02	1
Benzo[k]fluoranthene	ND		63	and the second	ug/Kg	*		12/15/20 19:02	1
bis(chloroisopropyl) ether	ND	*_	210	6.4	ug/Kg	¢	12/11/20 15:17	12/15/20 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	96		47 - 119					12/15/20 19:02	1
Phenol-d5 (Surr)	81		59 - 120					12/15/20 19:02	1
Nitrobenzene-d5 (Surr)	100		54 - 120					12/15/20 19:02	
2-Fluorobiphenyl	90		57 - 120					12/15/20 19:02	1
2,4,6-Tribromophenol (Surr)	107		52_115					12/15/20 19:02	1
Terphenyl-d14 (Surr)	119		73 - 125				12/11/20 15:17	12/15/20 19:02	1
Method: NWTPH-Gx - Nort	hwest - Volatile	Petroleur	n Products (GC)					

Method: NWIPH-GX - Northwest	- volatile	Petroleul	II FIOQUCE						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		14	6.4	mg/Kg	\$	12/10/20 09:15	12/10/20 12:54	1

Job ID: 580-99593-1

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lient Sample ID: 20-C0 ate Collected: 12/07/20 08:	30					L		e ID: 580-99 Matrix	: Solic
ate Received: 12/08/20 14:4	44				_			Percent Solid	s: 93.9
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	94	2	50 - 150				12/10/20 09:15	12/10/20 12:54	
Method: NWTPH-Dx - North	west - Semi-V	olatile Pet	roleum Prod	lucts (G0	3)				
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
#2 Diesel (C10-C24)	ND		52	13	mg/Kg	¢	12/21/20 08:35	12/21/20 22:54	· · ·
Motor Oil (>C24-C36)	33	J	52	18	mg/Kg	¢	12/21/20 08:35	12/21/20 22:54	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
o-Terphenyl	87		50 - 150				12/21/20 08:35	12/21/20 22:54	
Method: 6020B - Metals (IC	P/MS)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Lead	8.4		0.44	0.042	mg/Kg	×	12/17/20 12:22	12/18/20 17:00	1(
Cadmium	0.14	J	0.70	0.067	mg/Kg	¢	12/17/20 12:22	12/18/20 17:00	1(
Arsenic	4.8		0.44	0.087	mg/Kg	×	12/17/20 12:22	12/18/20 17:00	1(
Chromium	18		0.87	0.055	mg/Kg	¢	12/17/20 12:22	12/18/20 17:00	1(
Method: 7471A - Mercury (
Analyte	,	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury	0.019	J	0.025	0.0076	mg/Kg	¢	12/14/20 13:46	12/15/20 12:08	
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unlt	D	Prepared	Analyzed	Dil Fa
Percent Solids	93.9		0.1	0.1	%	1		12/09/20 15:39	
	6.1		0.1	0.1				12/09/20 15:39	

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Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-3453 Matrix: Solid Analysis Batch: 345537	97/1-A							le ID: Method Prep Type: To Prep Batch:	otal/N/
Analysis Batch. 343537	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		12/11/20 16:40		
Chloromethane	ND		5.0	0.93	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Vinyl chloride	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Bromomethane	ND	223 27 7 27 27 27 27 27 27 27 27 27 27 27 2	1.0	0.21	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Chloroethane	ND		10	0.75	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,1-Dichloroethene	ND		5.0	1.1	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Methylene Chloride	ND		40	9.9	ug/Kg		12/11/20 16:40	12/11/20 20:46	
rans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1.1-Dichloroethane	ND	G	1.0	0.19	ug/Kg		12/11/20 16:40	12/11/20 20:46	
2,2-Dichloropropane	ND		5.0	0.33	ug/Kg		12/11/20 16:40	12/11/20 20:46	
cis-1,2-Dichloroethene	ND		3.0	0.60	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Bromochloromethane	ND	settin resident.	2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Chloroform	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,1,1-Trichloroethane	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Carbon tetrachloride	ND		2.0	0,30	ug/Kg	·	12/11/20 16:40	12/11/20 20:46	
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	
Benzene	ND		2.0	0.39	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,2-Dichloroethane	ND	· · · · · · · · · · · · · · ·	1.0	0.20	ug/Kg		12/11/20 16:40	12/11/20 20:46	506 * 13
Trichloroethene	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	
I,2-Dichloropropane	ND		2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Dibromomethane	ND		1.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Bromodichloromethane	ND		1.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
cis-1,3-Dichloropropene	ND		1.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Toluene	ND		10		ug/Kg		12/11/20 16:40	12/11/20 20:46	
rans-1,3-Dichloropropene	ND		10		ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,1,2-Trichloroethane	ND		2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Tetrachloroethene	ND	• • • • • • • • • • • • • • • • • • • •	2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,3-Dichloropropane	ND		2.0		ug/Kg		12/11/20 16:40		
Dibromochloromethane	ND		1.5		ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,2-Dibromoethane	ND		1.0		ug/Kg			12/11/20 20:46	
Chlorobenzene	ND		2.0		ug/Kg			12/11/20 20:46	
	ND		2.0		ug/Kg			12/11/20 20:46	
Ethylbenzene	ND		3.0		ug/Kg		the second second second second second	12/11/20 20:46	
1,1,1,2-Tetrachloroethane	ND		4.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,1,2,2-Tetrachloroethane	ND		-4.0 10		ug/Kg		12/11/20 16:40	12/11/20 20:46	
n-Xylene & p-Xylene	ND		5.0	III Francisco	ug/Kg	••••	12/11/20 16:40		5888 · 12
o-Xylene	ND		3.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Styrene			5.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
Bromoform	ND		2.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
sopropylbenzene	ND		2.0 10				12/11/20 16:40	12/11/20 20:46	
	ND		5.0		ug/Kg ug/Kg		12/11/20 16:40	12/11/20 20:46	
N-Propylbenzene	ND						12/11/20 16:40		
,2,3-Trichloropropane	ND		5.0		ug/Kg			12/11/20 20:46	
2-Chlorotoluene	ND		5.0		ug/Kg		12/11/20 16:40		
,3,5-Trimethylbenzene	ND		5.0		ug/Kg	500 S 1	12/11/20 16:40	12/11/20 20:46	
I-Chlorotoluene	ND		5.0		ug/Kg		12/11/20 16:40		
Butylbenzene	ND		3.0		ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,2,4-Trimethylbenzene	ND		5.0	1.2	ug/Kg		12/11/20 16:40	12/11/20 20:46	

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-345 Matrix: Solid Analysis Batch: 345537	39771 - A						-	le ID: Methoo Prep Type: To Prep Batch:	otal/NA
-	MB	MB				_	_		
Analyte		Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND	A	3.0	0.67	ug/Kg		12/11/20 16:40	12/11/20 20:46	1.00000
1,3-Dichlorobenzene	ND		5.0	1.1	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		12/11/20 16:40	12/11/20 20:46	
1,4-Dichlorobenzene	ND		5.0	0.98	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
n-Butylbenzene	ND		3.0	0.63	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2-Dichlorobenzene	ND		10	1,3	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2,4-Trichlorobenzene	ND		2.0	0.42	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
Naphthalene	1.85	J	10	1.8	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		12/11/20 16:40	12/11/20 20:46	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		80 - 120				12/11/20 16:40	12/11/20 20:46	1
4-Bromofluorobenzene (Surr)	96		80 - 120				12/11/20 16:40	12/11/20 20:46	1
Dibromofluoromethane (Surr)	103		80 - 120				12/11/20 16:40	12/11/20 20:46	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 121				12/11/20 16:40	12/11/20 20:46	1

Lab Sample ID: LCS 580-345397/2-A Matrix: Solid Analysis Batch: 345537

Prep Batch: 345397 LCS LCS %Rec. Spike Analyte Added **Result Qualifier** Unit D %Rec Limits Dichlorodifluoromethane 20.0 35.0 *+ ug/Kg 175 24 - 150 20.0 27.8 ug/Kg 139 52 - 150 Chloromethane 20.0 24.3 ug/Kg 122 54 - 150 Vinyl chloride 133 42 - 150 20.0 26,6 ug/Kg Bromomethane Chloroethane 20.0 24.0 ug/Kg 120 50-150 20.0 22.8 ug/Kg 114 71-150 Trichlorofluoromethane 25.4 127 73 - 143 1,1-Dichloroethene 20.0 ug/Kg 114 66 - 140 Methylene Chloride 20.0 22.9 J ug/Kg trans-1,2-Dichloroethene 20.0 21.6 ug/Kg 108 77 - 134 1.1-Dichloroethane 20.0 21.9 ug/Kg 110 78-135 20.0 22.0 110 62 - 150 ug/Kg 2,2-Dichloropropane cis-1,2-Dichloroethene 20.0 22.2 ug/Kg 111 68 - 132 20.0 23.0 115 76-131 Bromochloromethane ug/Kg 103 74 - 133 Chloroform 20.0 20.7 ug/Kg 106 78 - 144 1,1,1-Trichloroethane 20,0 21.3 ug/Kg 22.4 112 66 - 150 Carbon tetrachloride 20.0 ug/Kg 1,1-Dichloropropene 20.0 20.9 ug/Kg 104 76-140 20.0 109 79-135 Benzene 21.8 ug/Kg 20.0 22.4 ug/Kg 112 76-132 1,2-Dichloroethane 109 80 - 134 20.0 21.7 ug/Kg Trichloroethene 1,2-Dichloropropane 20.0 22.0 ug/Kg 110 65-136 20.0 23.5 ug/Kg 118 72-130 Dibromomethane 102 73 - 125 Bromodichloromethane 20.0 20.3 ug/Kg 93 80 - 122 cis-1,3-Dichloropropene 20.0 18.5 ug/Kg

Eurofins TestAmerica, Seattle

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

1

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Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-345397/2-A Matrix: Solid Analysis Batch: 345537				Clier	nt Sar	nple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 345397
Aughte	Spike Added		LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Analyte	20.0	18.2		ug/Kg		91	75 - 137
trans-1,3-Dichloropropene	20.0	18.3		ug/Kg		91	80 - 121
1,1,2-Trichloroethane	20.0	20.1		ug/Kg		101	80 - 123
Tetrachloroethene	20.0	17.3		ug/Kg	o P	87	58 - 150
1,3-Dichloropropane	20.0	19.3		ug/Kg		9 6	75 - 120
Dibromochloromethane	20.0	18.8		ug/Kg		94	75 - 132
1.2-Dibromoethane	20.0	20.6		ug/Kg		103	77 - 123
Chlorobenzene	20.0	18.3		ug/Kg		91	80 - 131
Ethylbenzene	20.0	19.6		ug/Kg		98	80 - 135
1,1,1,2-Tetrachloroethane	20.0	18.4		ug/Kg		92	79 - 128
1,1,2.2-Tetrachloroethane	20.0	19.3		ug/Kg		97	77 - 127
m-Xylene & p-Xylene	20.0	17.1		ug/Kg		86	80 - 132
o-Xylene	20.0	19.1	ornan, 1994	ug/Kg		95	80 - 132
Styrene	20.0	18.4		ug/Kg		92	79 - 129
Bromoform	20.0	19.0		ug/Kg		95	71 - 146
Isopropylbenzene	20.0	18.9	12.010000	ug/Kg	11222	94	81 - 140
Bromobenzene	20.0	19.2		ug/Kg		96	78 - 126
N-Propylbenzene	20.0	17.8		ug/Kg		89	68 - 149
1,2,3-Trichloropropane	20.0	19.7		ug/Kg		98	77 - 127
2-Chlorotoluene	20.0	16.6		ug/Kg		83	77 - 134
1,3,5-Trimethylbenzene	20.0	17.8		ug/Kg		8g	72 - 142
4-Chlorotoluene	20.0	16.8		ug/Kg		84	71 - 137
t-Butylbenzene	20.0	17.4		ug/Kg		87	72 - 144
1,2,4-Trimethylbenzene	20.0	17.8		ug/Kg		89	73 - 138
sec-Butylbenzene	20.0	18.0	00++-000000	ug/Kg		90	71 - 143
1,3-Dichlorobenzene	20.0	18.3		ug/Kg		91	78 - 132
4-Isopropyltoluene	20.0	17.8		ug/Kg		89	71 - 142
1,4-Dichlorobenzene	20.0	18.4		ug/Kg		92	77 - 123
n-Butylbenzene	20.0	16.8		ug/Kg		84	69 - 143
1,2-Dichlorobenzene	20.0	18.5		ug/Kg		93	78 - 126
1,2-Dibromo-3-Chloropropane	20.0	20.1		ug/Kg	191	100	75 - 129
1.2.4-Trichlorobenzene	20.0	20.0		ug/Kg		100	74 - 131
1.2.3-Trichlorobenzene	20.0	19.5		ug/Kg		97	68 - 136
Hexachlorobutadiene	20.0	18.6		ug/Kg		93	65 - 150
Naphthalene	20.0	21.5		ug/Kg		107	64 - 136
Methyl tert-butyl ether	20.0	24.0		ug/Kg		120	77 - 132
	20.0	2110		-313			
LCS LCS							
Surrogate %Recovery Qualifi	ier Limits						

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	93		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 121

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Matrix: Solid							Prep Ty	-	
Analysis Batch: 345537							Prep Ba	atch: 34	
A L d	Spike		LCSD	6 Fac 24		0/ D = =	%Rec. Limits	RPD	RPI
Analyte Dichlorodifluoromethane	Added	42.0	Qualifier *+	Unit	<u>D</u>	210	24 - 150	18	Limi
	20.0	42.0 28.9	··+	ug/Kg		210 144	24 - 150 52 - 150	4	20
Chloromethane	20.0	26.9		ug/Kg		139	52 - 150 54 - 150	13	4
Vinyl chloride	20.0		n stania manda a	ug/Kg		139	42 - 150	2	4
Bromomethane		27.0 25.4		ug/Kg			42 - 150 50 - 150	6	4
Chloroethane	20.0	25.4		ug/Kg		127	50 - 150 71 - 150	3	3
Trichlorofluoromethane	20.0 20.0	23.4 25.8		ug/Kg ug/Kg		117 129	73-143	2	3
1,1-Dichloroethene	20.0	23.8	,			129	66 - 140	2	3
Methylene Chloride			J	ug/Kg			77 - 134	° 2	3
trans-1,2-Dichloroethene	20.0	21.2		ug/Kg		106	77 - 134	2	3
1,1-Dichloroethane	20.0	22.3		ug/Kg		112			
2,2-Dichloropropane	20.0	22.7		ug/Kg		113	62 - 150 68 - 122	3	4
cis-1,2-Dichloroethene	20.0	22.2		ug/Kg		111	68 - 132 76 - 131	0	2
Bromochloromethane	20.0	23.6		ug/Kg		118		3	
Chloroform	20.0	21.0		ug/Kg		105	74 - 133	1	30
1,1,1-Trichloroethane	20.0	21.9		ug/Kg		109	78 - 144	3	3
Carbon tetrachloride	20.0	22.7		ug/Kg		114	66 - 150	1	3
1,1-Dichloropropene	20.0	21.3		ug/Kg		106	76 - 140	2	3
Benzene	20.0	22.8		ug/Kg		114	79 - 135	4	3
1,2-Dichloroethane	20.0	23.2		ug/Kg		116	76 - 132	4	2
Trichloroethene	20.0	21.7		ug/Kg		108	80 - 134	0	4
1,2-Dichloropropane	20.0	23.4	0.000.000.00	ug/Kg		117	65 - 136	6	3
Dibromomethane	20.0	23.8		ug/Kg		119	72 - 130	1	34
Bromodichloromethane	20.0	20.8		ug/Kg		104	73 - 125	2	4
cis-1,3-Dichloropropene	20.0	19.1		ug/Kg		96	80 - 122	3	40
Toluene	20.0	19.0		ug/Kg		95	75 - 137	4	3
trans-1,3-Dichloropropene	20.0	19.0		ug/Kg		95	80 - 121	4	40
1,1,2-Trichloroethane	20.0	20.2		ug/Kg		101	80 - 123	1	3
Tetrachloroethene	20.0	17.5		ug/Kg		87	58 - 150	1	40
1,3-Dichloropropane	20.0	20.1		ug/Kg		101	75-120	4	3
Dibromochloromethane	20.0	19.1		ug/Kg		96	75.132	2	40
1,2-Dibromoethane	20.0	21.5		ug/Kg		107	77 - 123	4	3
Chlorobenzene	20.0	19.0		ug/Kg		95	80 - 131	4	40
Ethylbenzene	20.0	20.5		ug/Kg		103	80 - 135	5	3
1,1,1,2-Tetrachloroethane	20.0	18.9		ug/Kg		95	79 - 128	3	4(
1,1,2,2-Tetrachloroethane	20.0	19.5		ug/Kg		97	77 - 127	1	4(
m-Xylene & p-Xylene	20.0	17.6		ug/Kg		88	80 - 132	3	38
o-Xylene	20.0	20.0		ug/Kg		100	80 - 132	5	39
Styrene	20.0	19.0		ug/Kg		95	79.129	3	40
Bromoform	20.0	18.4		ug/Kg		92	71 - 146	3	4
Isopropylbenzene	20.0	19.2		ug/Kg		96	81 - 140	2	4
Bromobenzene	20.0	19.6		ug/Kg		98	78 - 126	2	4
N-Propylbenzene	20.0	18.6		ug/Kg		93	68 - 149	4	4(
1,2,3-Trichloropropane	20.0	19.0		ug/Kg		95	77 - 127	3	4(
2-Chlorotoluene	20.0	17.8		ug/Kg		89	77 - 134	7	4(
1,3,5-Trimethylbenzene	20.0	18.4		ug/Kg		92	72 - 142	3	4(
4-Chlorotoluene	20.0	17.3		ug/Kg		87	71 - 137	3	40
t-Butylbenzene	20.0	18.0		ug/Kg		90	72 - 144	3	4(
1,2,4-Trimethylbenzene	20.0	18.7		ug/Kg		94	73 - 138	5	4(

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Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

109

МВ МВ

Lab Sample ID: LCSD 580-3 Matrix: Solid Analysis Batch: 345537	45397/3-A	k			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep Ba	pe: Tot	al/NA
Analysis Buton: 040001			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
sec-Butylbenzene			20.0	18.5		ug/Kg		93	71 - 143	3	40
1,3-Dichlorobenzene			20.0	19.2		ug/Kg		96	78 - 132	5	4(
4-Isopropyltoluene			20.0	18.6		ug/Kg		93	71 - 142	5	40
1,4-Dichlorobenzene			20.0	19.3		ug/Kg		96	77 - 123	4	4(
n-Butylbenzene			20.0	17.7		ug/Kg		88	69 - 143	6	4(
1,2-Dichlorobenzene			20.0	19.4		ug/Kg		97	78 - 126	4	4(
1,2-Dibromo-3-Chloropropane			20.0	19.0		ug/Kg		95	75 - 129	5	4(
1,2,4-Trichlorobenzene			20.0	20.4		ug/Kg		102	74 - 131	2	4(
1,2,3-Trichlorobenzene			20.0	19.3		ug/Kg		97	68 - 136	1	4(
Hexachlorobutadiene			20.0	18.6		ug/Kg		93	65 - 150	0	36
Naphthalene			20.0	20.8		ug/Kg		104	64 - 136	3	4(
Methyl tert-butyl ether			20.0	25.0		ug/Kg		125	77 - 132	4	25
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	91		80-120								
4-Bromofluorobenzene (Surr)	102		80-120								
Dibromofluoromethane (Surr)	104		80 - 120								

80 - 121

Lab Sample ID: MB 580-346011/1-A
Matrix: Solid
Analysis Batch: 346000

1,2-Dichloroethane-d4 (Surr)

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 346011

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		2.0	0.49	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Chloromethane	ND		5.0	0.93	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Vinyl chloride	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Bromomethane	ND	C III EDODA	1.0	0.21	ug/Kg	Ce 112 • 115	12/19/20 15:29	12/19/20 16:47	1
Chloroethane	ND		10	0.75	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Trichlorofluoromethane	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1.1-Dichloroethene	ND		5.0	1.1	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Methylene Chloride	ND		40	9 .9	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
trans-1,2-Dichloroethene	ND		2.0	0.40	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1.1-Dichloroethane	ND		1.0	0.19	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
2,2-Dichloropropane	ND		5.0	0.33	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
cis-1,2-Dichloroethene	ND		3.0	0.60	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Bromochloromethane	ND		2.0	0.25	ug/Kg	• • • • • • • •	12/19/20 15:29	12/19/20 16:47	1
Chloroform	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1.1.1-Trichloroethane	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Carbon tetrachloride	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,1-Dichloropropene	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Benzene	ND		2.0	0.39	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2-Dichloroethane	ND		1.0	0.20	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Trichloroethene	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2-Dichloropropane	ND		2.0	0.40	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Dibromomethane	ND	E	1.0	0.17	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Bromodichloromethane	ND		1.0	0.18	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/19/20 15:29	12/19/20 16:47	1

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Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-346011/1-A Matrix: Solid

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 346011

Analysis Batch: 346000	MB	мв						Prep Batch:	
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		10	1.3	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
trans-1,3-Dichloropropene	ND		10	0.60	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,1,2-Trichloroethane	ND		2.0	0.25	ug/Kg		12/19/20 15:29	12/19/20 16:47	
Tetrachloroethene	ND		2.0	0.40	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,3-Dichloropropane	ND		2.0	0.23	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Dibromochloromethane	ND		1.5	0.27	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2-Dibromoethane	ND		1.0	0.20	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Chlorobenzene	ND		2.0	0.25	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Ethylbenzene	ND		2.0	0.41	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,1,1,2-Tetrachloroethane	ND		3.0	0.59	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,1,2,2-Tetrachloroethane	ND		4.0	0.90	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
m-Xylene & p-Xylene	ND		10	0.56	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
o-Xylene	ND		5.0	0.92	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Styrene	ND		3.0	0.74	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Bromoform	ND		5.0	0.84	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Isopropylbenzene	ND		2.0	0.46	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Bromobenzene	ND		10	1.0	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
N-Propylbenzene	ND		5.0	0.76	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2,3-Trichloropropane	ND		5.0	1.0	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
2-Chlorotoluene	ND		5.0	0.93	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,3,5-Trimethylbenzene	ND		5.0	0.81	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
4-Chlorotoluene	ND		5.0	1.0	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
t-Butylbenzene	ND		3.0	0.66	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2,4-Trimethylbenzene	ND		5.0	1.2	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
sec-Butylbenzene	ND	o - Weitzabberg	3.0	0.67	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,3-Dichlorobenzene	ND		5.0	1.1	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,4-Dichlorobenzene	ND		5.0	0.98	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
n-Butylbenzene	ND		3.0	0.63	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2-Dichlorobenzene	ND		10	1.3	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2-Dibromo-3-Chloropropane	ND		10	1.6	ug/Kg	00000	12/19/20 15:29	12/19/20 16:47	10000000
1,2,4-Trichlorobenzene	ND		2.0	0.42	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
1,2,3-Trichlorobenzene	ND		3.0	0.60	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Hexachlorobutadiene	ND		3.0	0.60	ug/Kg	O Dees	12/19/20 15:29	12/19/20 16:47	1
Naphthalene	ND		10	1.8	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
Methyl tert-butyl ether	ND		2.0	0.30	ug/Kg		12/19/20 15:29	12/19/20 16:47	1
		MB							
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120				12/19/20 15:29	12/19/20 16:47	1
4-Bromofluorobenzene (Surr)	96		80 - 120					12/19/20 16:47	1
Dibromofluoromethane (Surr)	101		80 - 120	-				12/19/20 16:47	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 121				12/19/20 15:29	12/19/20 16:47	1

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Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-346011/2-A Matrix: Solid Analysis Batch: 346000			Clie	nt Sai	nple ID	Lab Control Sample Prep Type: Total/NA Prep Batch: 346011	
-	Spike		LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Dichlorodifluoromethane	20.0	25.3		ug/Kg		127	24 - 150
Chloromethane	20.0	23.6		ug/Kg		118	52 - 150
Vinyl chloride	20.0	21.0		ug/Kg		105	54 - 150
Bromomethane	20.0	20.1		ug/Kg		101	42-150
Chloroethane	20.0	24.0		ug/Kg		120	50 - 150
Trichlorofluoromethane	20.0	21.4		ug/Kg		107	71 - 150
1,1-Dichloroethene	20.0	23.0		ug/Kg		115	73-143
Methylene Chloride	20.0	14.9	J	ug/Kg		75	66.140
trans-1,2-Dichloroethene	20.0	19.1		ug/Kg		95	77 - 134
1,1-Dichloroethane	20.0	20.5		ug/Kg		103	78 - 135
2,2-Dichloropropane	20.0	20.1		ug/Kg		101	62 - 150
cis-1,2-Dichloroethene	20.0	20.0		ug/Kg		100	68 - 132
Bromochloromethane	20.0	20.8	15.0555555	ug/Kg	· ·)= ·)#(= ·	104	76-131
Chloroform	20.0	18.5		ug/Kg		93	74 - 133
1.1.1-Trichloroethane	20.0	20.0		ug/Kg		100	78 - 144
Carbon tetrachloride	20.0	21.3		ug/Kg		106	66 - 150
	20.0	20.3		ug/Kg		102	76 - 140
1,1-Dichloropropene	20.0	20.0		ug/Kg		100	79_135
Benzene	20.0	19.4		ug/Kg		97	76-132
1,2-Dichloroethane		19.4		ug/Kg		gg	80 - 134
Trichloroethene	20.0	19.9				100	65 - 136
1,2-Dichloropropane	20.0			ug/Kg		100	72 - 130
Dibromomethane	20.0	20.5		ug/Kg			73 - 125
Bromodichloromethane	20.0	18.3		ug/Kg		91 92	80 - 122
cis-1,3-Dichloropropene	20.0	16.3		ug/Kg		82	
Toluene	20.0	17.3		ug/Kg		87	75 - 137
trans-1,3-Dichloropropene	20.0	16.5		ug/Kg		82	80 - 121
1,1,2-Trichloroethane	20.0	16.9	 • • • • • • • • • • • • • • • • • • •	ug/Kg		84	80 - 123
Tetrachloroethene	20.0	16.8		ug/Kg		84	58 - 150
1,3-Dichloropropane	20.0	17.1		ug/Kg		86	75 - 120
Dibromochloromethane	20.0	16.4		ug/Kg		82	75 - 132
1,2-Dibromoethane	20.0	18.1		ug/Kg		91	77 - 123
Chlorobenzene	20.0	16.7		ug/Kg		84	80 - 131
Ethylbenzene	20.0	17.7		ug/Kg		88	80 - 135
1,1,1,2-Tetrachloroethane	20.0	16.4		ug/Kg		82	79 - 128
1,1,2,2-Tetrachloroethane	20.0	16.3		ug/Kg		81	77 - 127
m-Xylene & p-Xylene	20.0	15.6	*_	ug/Kg		78	80 - 132
o-Xylene	20.0	17.4		ug/Kg		87	80-132
Styrene	20.0	16.6		ug/Kg		83	79-129
Bromoform	20.0	15.5		ug/Kg		78	71 - 146
Isopropylbenzene	20.0	16.9		ug/Kg		85	81 - 140
	20.0	16.3		ug/Kg		81	78 - 126
Bromobenzene	20.0	16.0		ug/Kg		80	68 - 149
N-Propylbenzene	20.0	16.1		ug/Kg		80	77 - 127
1,2,3-Trichloropropane	20.0	15.3		ug/Kg		77	77 - 134
2-Chlorotoluene	20.0	15.3		ug/Kg ug/Kg		78	72 - 142
1,3,5-Trimethylbenzene	A A A A A A A A A A A A A A A A A A A		 CONTRACTOR 	ug/Kg		77	71 - 137
4-Chlorotoluene	20.0	15.3				77	72-144
t-Butylbenzene	20.0	15.4		ug/Kg			
1,2,4-Trimethylbenzene	20.0	16.0		ug/Kg		80	73 - 138

Dibromofluoromethane (Surr)

1,2-Dichloroethane-d4 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

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Lab Sample ID: LCS 580-34 Matrix: Solid Analysis Batch: 346000	6011/2-A					Clier	nt Sar	nple ID:	Lab Control Sample Prep Type: Total/NA Prep Batch: 346011
-			Spike	LCS	LCS				%Rec.
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
sec-Butylbenzene			20.0	15.6		ug/Kg		78	71 - 143
1,3-Dichlorobenzene	1020200000		20.0	16.1		ug/Kg		81	78 - 132
4-Isopropyltoluene			20.0	15.4		ug/Kg		77	71 - 142
1,4-Dichlorobenzene		00000111007	20.0	15.8		ug/Kg		79	77 - 123
n-Butylbenzene			20.0	14.4		ug/Kg		72	69 - 143
1,2-Dichlorobenzene			20.0	16.2		ug/Kg		81	78 - 126
1,2-Dibromo-3-Chloropropane			20.0	15.8		ug/Kg		79	75 - 129
1,2,4-Trichlorobenzene			20.0	16.9		ug/Kg		85	74 - 131
1,2,3-Trichlorobenzene			20.0	16.6		ug/Kg		83	68 - 136
Hexachlorobutadiene			20.0	14.5		ug/Kg		73	65 - 150
Naphthalene			20.0	18.1		ug/Kg		90	64 - 136
Methyl tert-butyl ether			20.0	21.0		ug/Kg		105	77 - 132
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	88		80 - 120						
4-Bromofluorobenzene (Surr)	94		80 - 120						

80 - 120

80 - 121

Lab Sample ID: LCSD 580-346011/3-A Matrix: Solid Analysis Batch: 346000			l	Client Sa	mple	ID: Lab	Control Prep Ty Prep Ba	pe: Tot	al/NA
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Dichlorodifluoromethane	20.0	24.5		ug/Kg		122	24 - 150	4	40
Chloromethane	20.0	24.7		ug/Kg		123	52 - 150	5	26
Vinyl chloride	20.0	24.3		ug/Kg		121	54 - 150	15	40
Bromomethane	20.0	22.0		ug/Kg		110	42 - 150	9	40
Chloroethane	20.0	21.5		ug/Kg		107	50 <u>-</u> 150	11	31
Trichlorofluoromethane	20.0	19.5		ug/Kg		97	71 - 150	10	36
1,1-Dichloroethene	20.0	22.2		ug/Kg		111	73 - 143	4	34
Methylene Chloride	20.0	21.3	J *1	ug/Kg		106	66 - 140	35	30
trans-1,2-Dichloroethene	20.0	19.5		ug/Kg		98	77 - 134	2	33
1,1-Dichloroethane	20.0	21.2		ug/Kg		106	78 - 135	3	31
2,2-Dichloropropane	20.0	20.7		ug/Kg		104	62 - 150	3	40
cis-1,2-Dichloroethene	20.0	20.8		ug/Kg		104	68 - 132	4	32
Bromochloromethane	20.0	21.2		ug/Kg		106	76 - 131	2	28
Chloroform	20.0	19.4		ug/Kg		97	74 - 133	5	36
1,1,1-Trichloroethane	20.0	20.1		ug/Kg		101	78 - 144	1	38
Carbon tetrachloride	20.0	21.7		ug/Kg		109	66 - 150	2	39
1,1-Dichloropropene	20.0	20.1		ug/Kg		101	76 - 140	1	38
Benzene	20.0	20.5		ug/Kg		102	79 - 135	2	31
1,2-Dichloroethane	20.0	20.3		ug/Kg		101	76 - 132	5	29
Trichloroethene	20.0	19.5		ug/Kg		97	80 - 134	2	40
1,2-Dichloropropane	20.0	20.8		ug/Kg		104	65 - 136	4	37
Dibromomethane	20.0	21.1		ug/Kg		106	72 - 130	3	34
Bromodichloromethane	20.0	18.6		ug/Kg		93	73 - 125	2	40
cis-1,3-Dichloropropene	20.0	16.2		ug/Kg		81	80 - 122	1	40

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and the second

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-346011/3-A Matrix: Solid Analysis Batch: 346000			(Client Sa	mple	ID: Lat	Control Prep Ty Prep Ba	pe: Tot	al/NA
, maryone Baterine record	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	20.0	16.7		ug/Kg		83	75 - 137	4	34
trans-1,3-Dichloropropene	20.0	16.4		ug/Kg		82	80 - 121	0	40
1,1,2-Trichloroethane	20.0	17.3		ug/Kg		86	80 - 123	2	39
Tetrachloroethene	20.0	15.4	A 4	ug/Kg		77	58 - 150	8	40
1,3-Dichloropropane	20.0	17.7		ug/Kg		89	75 - 120	3	37
Dibromochloromethane	20.0	16.9		ug/Kg		85	75 - 132	4	40
1,2-Dibromoethane	20.0	18.0		ug/Kg		90	77 - 123	1	37
Chlorobenzene	20.0	16.7		ug/Kg		84	80 - 131	0	40
Ethylbenzene	20.0	18.0		ug/Kg		90	80 - 135	2	37
1,1,1,2-Tetrachloroethane	20.0	16.2		ug/Kg		81	79 - 128	1	40
1,1,2,2-Tetrachloroethane	20.0	17.1		ug/Kg		86	77 - 127	5	40
m-Xylene & p-Xylene	20.0	15.5	*_	ug/Kg		77	80 - 132	1	38
o-Xylene	20.0	17.0		ug/Kg		85	80 - 132	2	39
Styrene	20.0	16.6		ug/Kg		83	79 - 129	0	40
Bromoform	20.0	15.9		ug/Kg		79	71 - 146	2	40
Isopropylbenzene	20.0	17.1		ug/Kg		86	81 - 140	1	40
Bromobenzene	20.0	16.8		ug/Kg		84	78 - 126	3	40
N-Propylbenzene	20.0	16.6		ug/Kg		83	68 - 149	3	40
1,2,3-Trichloropropane	20.0	17.5		ug/Kg		88	77 - 127	9	40
2-Chlorotoluene	20.0	16.5		ug/Kg		82	77 - 134	7	40
1,3,5-Trimethylbenzene	20.0	16.4		ug/Kg		82	72 - 142	5	40
4-Chlorotoluene	20.0	16.0		ug/Kg		80	71 - 137	4	40
t-Butylbenzene	20.0	15.9		ug/Kg		80	72 - 144	3	40
1,2,4-Trimethylbenzene	20.0	16.6		ug/Kg		83	73 - 138	4	40
sec-Butylbenzene	20.0	16.7		ug/Kg		84	71 - 143	7	40
1,3-Dichlorobenzene	20.0	16.4		ug/Kg		82	78 - 132	2	40
4-Isopropyltoluene	20.0	16.5		ug/Kg		82	71 - 142	7	40
1,4-Dichlorobenzene	20.0	16.4		ug/Kg		82	77 - 123	4	40
n-Butylbenzene	20.0	15.4		ug/Kg		77	69 - 143	7	40
1.2-Dichlorobenzene	20.0	16.4		ug/Kg		82	78 - 126	1	40
1,2-Dibromo-3-Chloropropane	20.0	17.4		ug/Kg		87	75 - 129	10	40
1,2,4-Trichlorobenzene	20.0	17.6		ug/Kg		88	74 - 131	4	40
1,2,3-Trichlorobenzene	20.0	16.5		ug/Kg		82	68 - 136	0	40
Hexachlorobutadiene	20.0	15.3		ug/Kg		76	65 - 150	5	36
Naphthalene	20.0	17.6		ug/Kg		88	64 - 136	3	40
Methyl tert-butyl ether	20.0	21.4		ug/Kg		107	77 - 132	2	25
LCSD LCSD									
Surrogate %Recovery Qualifie	er Limits								

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	90		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 121

MDL Unit

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Prepared

Prep Type: Total/NA

Prep Batch: 345599

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The second

Analyzed

Client Sample ID: Method Blank

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-345599/1-A
Matrix: Solid
Analysis Batch: 345700MB MBAnalyteResultQualifierRLPhenolND150Bis(2-chloroethyl)etherND1002-ChlorophenolND200

Analyte	Result Qualifier	RL	MDL	Unit	U D	Prepared	Analyzed	DIFac
Phenol	ND	150	23	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Bis(2-chloroethyl)ether	ND	100	7.7	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Chlorophenol	ND	200	4.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,3-Dichlorobenzene	ND	50	4.8	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,4-Dichlorobenzene	ND	50	8.3	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzyl alcohol	ND	1000	50	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,2-Dichlorobenzene	ND	50	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Methylphenol	ND	150	9.8	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
3 & 4 Methylphenol	ND	200	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	
N-Nitrosodi-n-propylamine	ND	200	22	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Hexachloroethane	ND	150	4.3	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Nitrobenzene	ND	200	20	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Isophorone	ND	150	8.4	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Nitrophenol	ND	200	6.2	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4-Dimethylphenol	ND	200	60	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzoic acid	ND	4000	1200	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Bis(2-chloroethoxy)methane	ND	200	18	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4-Dichlorophenol	ND	200	60	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1,2,4-Trichlorobenzene	ND	50	6.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1 100
Naphthalene	34.8	25	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Chloroaniline	ND	1500	130	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Hexachlorobutadiene	ND	50	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Chloro-3-methylphenol	ND	150	33	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Methylnaphthalene	13.9 J	50	8.8	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Hexachlorocyclopentadiene	ND	100	7.7	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4,6-Trichlorophenol	ND	150	13	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4,5-Trichlorophenol	ND	200	8.1	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Chloronaphthalene	ND	25	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2-Nitroaniline	ND	100	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Dimethyl phthalate	ND	150	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Acenaphthylene	ND	25	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,6-Dinitrotoluene	ND	150	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
3-Nitroaniline	ND	300	100	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Acenaphthene	9.31 J	40	4.6	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4-Dinitrophenol	ND	2000	590	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Nitrophenol	ND	2000	170	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Dibenzofuran	ND	150	5.9	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
2,4-Dinitrotoluene	ND	200	43	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Diethyl phthalate	ND	400	22	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Chlorophenyl phenyl ether	ND	200	6.3	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Fluorene	ND	25	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Nitroaniline	ND	150	50	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4,6-Dinitro-2-methylphenol	ND	1000	100	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
N-Nitrosodiphenylamine	ND	60	8.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
4-Bromophenyl phenyl ether	ND	200	9.1	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Hexachlorobenzene	ND	50	15	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Pentachlorophenol	ND	400	63	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Phenanthrene	11.3 J	60	5.8	ug/Kg		12/15/20 11:55	12/16/20 14:46	1

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Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

53

115

Lab Sample ID: MB 580-345 Matrix: Solid Analysis Batch: 345700	599/1 -A							le ID: Method Prep Type: To Prep Batch: 3	otal/NA
·		MB				_		Amelymod	Dil Fac
Analyte		Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed 12/16/20 14:46	1
Anthracene	ND		60		ug/Kg		12/15/20 11:55		
Di-n-butyl phthalate	ND		500		ug/Kg			12/16/20 14:46	1
Fluoranthene	ND		40		ug/Kg			12/16/20 14:46	
Pyrene	ND		60		ug/Kg			12/16/20 14:46	1
Butyl benzyl phthalate	ND		200		0 0			12/16/20 14:46	1
3,3'-Dichlorobenzidine	ND		400		ug/Kg			12/16/20 14:46	1
Benzo[a]anthracene	ND		40		ug/Kg			12/16/20 14:46	1
Chrysene	ND		60	13	ug/Kg			12/16/20 14:46	1
Bis(2-ethylhexyl) phthalate	ND		600	71	ug/Kg			12/16/20 14:46	1
Di-n-octyl phthalate	ND		150	12	ug/Kg			12/16/20 14:46	1
Benzo[a]pyrene	ND		60	13	ug/Kg			12/16/20 14:46	1
Indeno[1,2,3-cd]pyrene	ND		40	12	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Dibenz(a,h)anthracene	ND		50	12	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzo[g,h,i]perylene	ND		60	18	ug/Kg			12/16/20 14:46	1
Carbazole	ND		150	7.3	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
1-Methylnaphthalene	7.21	J	30	5.0	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzo[b]fluoranthene	ND		40	10	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
Benzo[k]fluoranthene	ND		60	14	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
bis(chloroisopropyl) ether	ND		200	6.1	ug/Kg		12/15/20 11:55	12/16/20 14:46	1
	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)			47 - 119				12/15/20 11:55	12/16/20 14:46	1
Phenol-d5 (Surr)	84		59 - 120				12/15/20 11:55	12/16/20 14:46	1
Nitrobenzene-d5 (Surr)	97		54 - 120					12/16/20 14:46	1
2-Fluorobiphenyl	106	8.1.1	57 - 120				12/15/20 11:55	12/16/20 14:46	1
							40450044.55	10/16/00 11.16	4

Lab Sample ID: LCS 580-345599/2-A Matrix: Solid Analysis Batch: 345700

2,4,6-Tribromophenol (Surr)

Terphenyl-d14 (Surr)

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Client: Cascade Analytical Inc Project/Site: ANS Geo

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Analysis Batch, 545700	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Phenol	1000	858	• <u>•</u> ••••••••••••••••••••••••••••••••••	ug/Kg		86	59 - 120
Bis(2-chloroethyl)ether	1000	1020		ug/Kg		102	61 - 120
2-Chlorophenol	1000	889		ug/Kg		89	66 - 120
1,3-Dichlorobenzene	1000	881		ug/Kg		88	57 - 120
1,4-Dichlorobenzene	1000	852		ug/Kg		85	57 - 120
Benzyl alcohol	1000	968	J	ug/Kg		97	10 - 134
1,2-Dichlorobenzene	1000	856		ug/Kg		86	62 - 120
2-Methylphenol	1000	780		ug/Kg		78	53 - 120
3 & 4 Methylphenol	1000	807		ug/Kg		81	54 - 120
N-Nitrosodi-n-propylamine	1000	995		ug/Kg		100	56 - 138
Hexachloroethane	1000	881		ug/Kg		88	57 - 132
Nitrobenzene	1000	1020		ug/Kg		102	57 - 128
lsophorone	1000	1010		ug/Kg	1000	101	61 - 128
2-Nitrophenol	1000	993		ug/Kg		99	49 - 123
2,4-Dimethylphenol	1000	747		ug/Kg		75	31 - 129

52 - 115

73 - 125

Eurofins TestAmerica, Seattle

12/15/20 11:55 12/16/20 14:46

12/15/20 11:55 12/16/20 14:46

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 345599

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-345599/2-A Matrix: Solid Analysis Batch: 345700				Clie	nt Sar	nple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 345599
-	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzoic acid	2000	ND		ug/Kg		22	10 - 120
Bis(2-chloroethoxy)methane	1000	975		ug/Kg		97	60 - 120
2,4-Dichlorophenol	1000	933		ug/Kg		93	63 - 120
1,2,4-Trichlorobenzene	1000	977		ug/Kg		98	66 - 120
Naphthalene	1000	954		ug/Kg		95	68 - 120
4-Chloroaniline	1000	ND	*_	ug/Kg		7	10 - 120
Hexachlorobutadiene	1000	924		ug/Kg		g 2	64 - 130
4-Chloro-3-methylphenol	1000	1170		ug/Kg		117	55 - 120
2-Methylnaphthalene	1000	945		ug/Kg		95	70 - 120
Hexachlorocyclopentadiene	1000	618		ug/Kg		62	53 ₋ 131
2,4,6-Trichlorophenol	1000	989		ug/Kg		gg	37 - 120
2,4,5-Trichlorophenol	1000	781		ug/Kg		78	41 - 120
2-Chloronaphthalene	1000	1100	s de la la com	ug/Kg		110	65 - 120
2-Nitroaniline	1000	1080		ug/Kg		108	54 - 126
Dimethyl phthalate	1000	1070		ug/Kg		107	71 - 120
Acenaphthylene	1000	1080	000 D040	ug/Kg		108	63 - 120
2,6-Dinitrotoluene	1000	1060		ug/Kg		106	70 - 126
3-Nitroaniline	1000	465		ug/Kg		47	34 - 120
Acenaphthene	1000	1110		ug/Kg		111	64 - 120
2,4-Dinitrophenol	2000	ND	*_	ug/Kg		7	10 - 139
4-Nitrophenol	2000	1780		ug/Kg		89	10 - 140
Dibenzofuran	1000	1110	айн нахаан 1	ug/Kg		111	68 - 120
2,4-Dinitrotoluene	1000	1040		ug/Kg		104	63 - 120
	1000	1040		ug/Kg ug/Kg		104	66 - 135
Diethyl phthalate	1000	1100		ug/Kg		110	70 - 120
4-Chlorophenyl phenyl ether	1000	1060				106	68 - 121
Fluorene				ug/Kg			
4-Nitroaniline	1000	1030		ug/Kg		103	36 - 141 13 - 141
4,6-Dinitro-2-methylphenol	2000	835	J	ug/Kg		42	
N-Nitrosodiphenylamine	1000	961		ug/Kg		96	67 - 128
4-Bromophenyl phenyl ether	1000	1010		ug/Kg		101	65 - 127
Hexachlorobenzene	1000	905		ug/Kg		91	65 - 126
Pentachlorophenol	2000	854		ug/Kg		43	10 - 120
Phenanthrene	1000	922		ug/Kg		9 2	68 - 126
Anthracene	1000	944		ug/Kg		94	67 - 131
Di-n-butyl phthalate	1000	980		ug/Kg		98	66 - 150
Fluoranthene	1000	976		ug/Kg		98	69 - 133
Pyrene	1000	968		ug/Kg		97	68 - 141
Butyl benzyl phthalate	1000	997		ug/Kg		100	58 - 150
3,3'-Dichlorobenzidine	2000	1460		ug/Kg		73	49 - 148
Benzo[a]anthracene	1000	977		ug/Kg		98	60 - 135
Chrysene	1000	1010		ug/Kg		101	69 - 127
Bis(2-ethylhexyl) phthalate	1000	997		ug/Kg		100	45 - 150
Di-n-octyl phthalate	1000	1160		ug/Kg		116	53 - 150
Benzo[a]pyrene	1000	952		ug/Kg		95	62 - 129
Indeno[1,2,3-cd]pyrene	1000	525		ug/Kg		52	52 - 146
Dibenz(a,h)anthracene	1000	629		ug/Kg		63	59 - 139
Benzo[g,h,i]perylene	1000	488	*_	ug/Kg		49	64 - 146
Carbazole	1000	1130		ug/Kg		113	43 - 150
1-Methylnaphthalene	1000	982		ug/Kg		98	69-120

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Client Sample ID: 20-C025783

Prep Type: Total/NA

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-345599/2-A Matrix: Solid Analysis Batch: 345700				Clien	it Sai	mple ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 345599
·	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzo[b]fluoranthene	1000	1070		ug/Kg		107	58 - 136
Benzo[k]fluoranthene	1000	1090		ug/Kg		109	68 - 123
bis(chloroisopropyl) ether	1000	1240	*+	ug/Kg		124	55 - 120
LCS LCS							

	200		
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	91		47 - 119
Phenol-d5 (Surr)	89		59 - 120
Nitrobenzene-d5 (Surr)	105		54 - 120
2-Fluorobiphenyl	104	00000000	57 - 120
2,4,6-Tribromophenol (Surr)	82		52 - 115
Terphenyl-d14 (Surr)	92		73-125

Lab Sample ID: 580-99593-4 MS Matrix: Solid Analysis Batch: 345700

Matrix: Solid Analysis Batch: 345700		0	Sailte	Ne	MS				Prep Batch: 345599 %Rec.
A a lucio	-	Sample Qualifier	Spike Added	-	Qualifier	Unit	D	%Rec	Limits
Analyte Phenol	ND	Qualifier	1050	917		ug/Kg	— <u>–</u>	88	59 - 120
Bis(2-chloroethyl)ether	ND		1050	1090		ug/Kg	¢	104	61 - 120
2-Chlorophenol	ND		1050	1010		ug/Kg	¢	96	66 - 120
1,3-Dichlorobenzene	ND		1050	946	nee. 1 - 2011	ug/Kg	¢	90	57 - 120
1,4-Dichlorobenzene	ND		1050	952		ug/Kg	ø	91	57 - 120
Benzyl alcohol	ND		1050	1080		ug/Kg	¢	104	10 - 134
1,2-Dichlorobenzene	ND		1050	964		ug/Kg	¢	92	62 - 120
2-Methylphenol	ND		1050	882		ug/Kg	¢	84	53 - 120
3 & 4 Methylphenol	ND		1050	863		ug/Kg	¢	83	54 - 120
N-Nitrosodi-n-propylamine	ND		1050	1190	•	ug/Kg	¢	114	56 - 138
Hexachloroethane	ND		1050	938		ug/Kg	₽	90	57 - 132
Nitrobenzene	ND		1050	1130		ug/Kg	¢	108	57 - 128
Isophorone	ND		1050	1110	• C • El • • 23	ug/Kg	¢	106	61 ₋ 128
2-Nitrophenol	ND		1050	1020		ug/Kg	₽	98	49 - 123
2,4-Dimethylphenol		F2 F1	1050	889		ug/Kg	☆	85	31 - 129
Benzoic acid	ND		2090	ND	F1	ug/Kg	₽	0	10 - 120
Bis(2-chloroethoxy)methane	ND		1050	1060		ug/Kg	¢	101	60 - 120
2,4-Dichlorophenol	ND	F2	1050	1040		ug/Kg	₽	99	63 - 120
1.2.4-Trichlorobenzene	ND		1050	1040		ug/Kg	¢	99	66 - 120
Naphthalene	ND		1050	985		ug/Kg	¢	94	68 - 120
4-Chloroaniline	ND	F1 *-	1050	ND	F 1	ug/Kg	¢	0	10-120
Hexachlorobutadiene	ND	2000 A. MAN	1050	994	//	ug/Kg	₽	95	64 - 130
4-Chloro-3-methylphenol	ND	F2	1050	1230		ug/Kg	¢	118	55-120
2-Methylnaphthalene	ND		1050	1050		ug/Kg	¢	100	70 - 120
Hexachlorocyclopentadiene	ND	F 1	1050	437	F1	ug/Kg	₽	42	53 - 131
2,4,6-Trichlorophenol	ND		1050	1080		ug/Kg	☆	104	37 - 120
2,4,5-Trichlorophenol	ND	F2	1050	870		ug/Kg	¢	83	41 - 120
2-Chloronaphthalene	ND		1050	1120		ug/Kg	₽	107	65 - 120
2-Nitroaniline	ND	F2	1050	1110		ug/Kg	¢	106	54 - 126
Dimethyl phthalate	ND		1050	1060		ug/Kg	ቑ	1 01	71 ₋ 120
Acenaphthylene	ND	F2	1050	1090		ug/Kg	☆	104	63 - 120

Phenol-d5 (Surr)

2-Fluorobiphenyl

Nitrobenzene-d5 (Surr)

Terphenyl-d14 (Surr)

2,4,6-Tribromopheno/ (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99593 Matrix: Solid Analysis Batch: 345700	3-4 MS						C	lient Sa	ample ID: 20-C025783 Prep Type: Total/NA Prep Batch: 345599
-	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	Ð	%Rec	Limits
2,6-Dinitrotoluene	ND	F2	1050	1100		ug/Kg	\$	105	70 - 126
3-Nitroaniline	ND	F2	1050	600		ug/Kg	₽	57	34 - 120
Acenaphthene	ND	F2	1050	1110		ug/Kg	¢	106	64 - 120
2,4-Dinitrophenol	ND	F1 *-	2090	ND	F1	ug/Kg	₽	0	10 - 139
4-Nitrophenol	ND		2090	1870	J	ug/Kg	¢	90	10 - 140
Dibenzofuran	ND	F2	1050	1110		ug/Kg	₽	106	68 - 120
2,4-Dinitrotoluene	ND		1050	1040		ug/Kg	¢	100	63 - 120
Diethyl phthalate	ND		1050	1080		ug/Kg	₽	103	66 - 135
4-Chlorophenyl phenyl ether	ND	F2	1050	1120		ug/Kg	¢	107	70 - 120
Fluorene	ND	F2	1050	1070		ug/Kg	₽	103	68 - 121
4-Nitroaniline	ND	F2	1050	978		ug/Kg	¢	94	36 - 141
4,6-Dinitro-2-methylphenol	ND	F2	2090	292	J	ug/Kg	₽	14	13 - 141
N-Nitrosodiphenylamine	ND	F2 F1	1050	1070		ug/Kg	¢	102	67 - 128
4-Bromophenyl phenyl ether	ND		1050	1130		ug/Kg	₽	108	65 - 127
Hexachlorobenzene	ND		1050	1060	ter 55er - 58	ug/Kg	₽	101	65 - 126
Pentachlorophenol	ND		2090	1410		ug/Kg	₽	67	10 - 120
Phenanthrene	ND		1050	1060		ug/Kg	₽	101	68 - 126
Anthracene	ND	0.00.0	1050	1070	07 5	ug/Kg		102	67 - 131
Di-n-butyl phthalate	ND		1050	1160		ug/Kg	₽	111	66 - 150
Fluoranthene	ND	F2	1050	1140		ug/Kg	₽	109	69 - 133
Pyrene	ND		1050	1130		ug/Kg	.∵. ¢	108	68 ₋ 141
Butyl benzyl phthalate	ND		1050	1010		ug/Kg	¢	97	58 - 150
3,3'-Dichlorobenzidine	ND	F1	2090	1510		ug/Kg	¢	72	49 - 148
Benzo[a]anthracene	ND		1050	988		ug/Kg	¢	94	60 - 135
Chrysene	ND		1050	982		ug/Kg	₽	94	69 - 127
Bis(2-ethylhexyl) phthalate	ND		1050	1030		ug/Kg	₽	98	45 - 150
Di-n-octyl phthalate	ND		1050	1370		ug/Kg	₽	131	53 - 150
Benzo[a]pyrene	ND		1050	1090		ug/Kg	¢	104	62 - 129
Indeno[1,2,3-cd]pyrene	ND		1050	673		ug/Kg	₽	64	52 - 146
Dibenz(a,h)anthracene	ND		1050	706		ug/Kg	¢	67	59 - 139
Benzo[g,h,i]perylene	ND	F1 *-	1050	559	F1	ug/Kg	¢	53	64 - 146
Carbazole	ND		1050	1260		ug/Kg	¢	120	43 - 150
1-Methylnaphthalene	ND		1050	1070		ug/Kg	¢	102	69 - 120
Benzo[b]fluoranthene	ND		1050	1270		ug/Kg	¢	121	58 - 136
Benzo[k]fluoranthene	ND		1050	1160		ug/Kg	¢	110	68 - 123
bis(chloroisopropyl) ether	C [2] K K K K K K K K K K K K K	F1 *+	1050	1600	F1	ug/Kg	¢	153	55 - 120
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	99		47 - 119						

12/22/2020

59-120

54-120

57-120

52 - 115 73 - 125

99

118

110

103

113

1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-99593- Matrix: Solid	4 MISU						C		ample ID: Prep Ty Prep Ba	pe: Tot	tal/NA
Analysis Batch: 345700	Sample	Sample	Spike	MSD	MSD				Явес.	aton. J	RPE
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Phenol	ND		1050	817		ug/Kg	\$	78	59-120	12	30
Bis(2-chloroethyl)ether	ND		1050	1080		ug/Kg	₽	103	61 - 120	1	30
2-Chlorophenol	ND		1050	904		ug/Kg	¢	86	66 - 120	11	3:
1,3-Dichlorobenzene	ND	• =	1050	906		ug/Kg	 X	87	57 - 120	4	29
1.4-Dichlorobenzene	ND		1050	897		ug/Kg	¢	86	57 - 120	6	3
Benzyl alcohol	ND		1050	977	J	ug/Kg	¢	93	10-134	10	4(
1.2-Dichlorobenzene	ND	-	1050	885		ug/Kg	¢	85	62-120	9	30
2-Methylphenol	ND		1050	608		ug/Kg	¢	58	53 - 120	37	4(
3 & 4 Methylphenol	ND		1050	659		ug/Kg	₽	63	54 ₋ 120	27	36
Charles and a second s second second seco	ND		1050	1120		ug/Kg	¢	107	56 - 138	6	
N-Nitrosodi-n-propylamine Hexachloroethane	ND		1050	947		ug/Kg	¢	91	57 - 132	1	34
Nitrobenzene	ND		1050	1110		ug/Kg	Ŕ	106	57 - 128	2	33
	ND		1050	1050		ug/Kg	¢	100	61 - 128	6	3
Isophorone	ND		1050	882		ug/Kg	¢.	84	49 - 123	15	30
2-Nitrophenol 2.4-Dimethylphenol	ND	F2 F1	1050		J F2 F1	ug/Kg	¢	18	31 - 129	129	40
The second state of the second s	ND		2090	ND		ug/Kg	° _	0	10 - 120	NC	4(
Benzoic acid	ND	FI	1050	996		ug/Kg	÷	95	60 - 120	6	33
Bis(2-chloroethoxy)methane		F.9	1050	990 817	E2	ug/Kg	¢	78	63 - 120	24	19
2,4-Dichlorophenol	ND	F2	1050	918	F 4	ug/Kg	asa." ¢t	88	66 - 120	12	18
1,2,4-Trichlorobenzene	ND		1050	900		ug/Kg	× ¢	86	68 - 120	9	15
Naphthalene	ND	F4 +	1050	900 ND	E1	ug/Kg	¢	0	10 - 120	NC	40
4-Chloroaniline		F1 *-			o¶l≊.co		Ť. ¢	81	64 - 130	16	19
Hexachlorobutadiene	ND	50	1050	850	50	ug/Kg	÷ ¢	86	55 - 120	31	25
4-Chloro-3-methylphenol	ND	F2	1050		F2	ug/Kg	× ¢	86	70 - 120	15	2
2-Methylnaphthalene	ND		1050	899	E.	ug/Kg	× ¢	45	53 - 131	6	2
Hexachlorocyclopentadiene	ND	F1	1050	466	F1	ug/Kg			37 - 120	24	20
2,4,6-Trichlorophenol	ND	F2	1050	849	F2	ug/Kg	¢	81	41 - 120	34	23
2,4,5-Trichlorophenol	ND	F2	1050	617	FZ	ug/Kg	¢ U	59	41 - 120 65 - 120	20	2´ 2´
2-Chloronaphthalene	ND		1050	911	50	ug/Kg	¢	87	65 - 120 54 - 126	20 27	16
2-Nitroaniline	ND	F2	1050	848	F2	ug/Kg	¢ 	81	54 - 120 71 - 120	23	21
Dimethyl phthalate	ND	F2	1050	839	F2	ug/Kg	¢	80		23	- 18
Ac e naphthylene	ND	F2	1050	844	F2	ug/Kg	¢	81	63 - 120		18
2,6-Dinitrotoluene	ND	F2	1050	891		ug/Kg	₽	85	70 ₋ 126 34 - 120	21 44	25
3-Nitroaniline	ND		1050	382	F2	ug/Kg	☆	37			19
Acenaphthene	ND		1050	905		ug/Kg	¢	87	64 - 120	20	
2,4-Dinitrophenol		F1 *-	2090	ND		ug/Kg	¢	0	10 - 139	NC	4(
4-Nitrophenol	ND		2090	1530		ug/Kg	¢.	73	10_140	20	31
Dibenzofuran	ND	F2	1050	905	F2	ug/Kg	¢	87	68 - 120	20	18
2,4-Dinitrotoluene	ND		1050	826		ug/Kg	¢	79	63 - 120	23	23
Diethyl phthalate	ND		1050	865		ug/Kg	₽	83	66 - 135	22	22
4-Chlorophenyl phenyl ether	ND		1050	871		ug/Kg	₽	83	70 - 120	25	2
Fluorene	ND		1050	854	F2	ug/Kg	¢	82	68 - 121	23	17
4-Nitroaniline	ND		1050	616		ug/Kg	₩.	59	36 - 141	45	23
4,6-Dinitro-2-methylphenol	ND		2090		J F2	ug/Kg	₽	23	13 - 141	48	40
N-Nitrosodiphenylamine		F2 F1	1050	218	F2 F1	ug/Kg	₽	21	67 - 128	132	30
4-Bromophenyl phenyl ether	ND		1050	888		ug/Kg	₽	85	65 - 127	24	32
Hexachlorobenzene	ND		1050	853		ug/Kg	⇔	82	65 - 126	21	32
Pentachlorophenol	ND		2090	1080		ug/Kg	₽	52	10 - 120	26	4(
Phenanthrene	ND		1050	866		ug/Kg	¢	83	68 - 126	20	27

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Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-9959	93-4 MSD						C	lient S	ample ID:		
Matrix: Solid									Prep Ty		
Analysis Batch: 345700									Prep Ba	atch: 34	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Anthracene	ND		1050	863		ug/Kg	¢	83	67 - 131	21	28
Di-n-butyl phthalate	ND		1050	935		ug/Kg	¢	89	66 - 150	21	26
Fluoranthene	ND	F2	1050	896	F2	ug/Kg	æ	86	69 - 133	24	21
Pyrene	ND	0	1050	913		ug/Kg	¢	87	68 - 141	21	24
Butyl benzyl phthalate	ND		1050	996		ug/Kg	¢	95	58 - 150	1	27
3,3'-Dichlorobenzidine	ND	F1	2090	ND	F1	ug/Kg	¢	0	49 - 148	NC	40
Benzo[a]anthracene	ND		1050	953		ug/Kg	⇔	91	60 - 135	4	21
Chrysene	ND		1050	969		ug/Kg	¢	93	69 - 127	1	27
Bis(2-ethylhexyl) phthalate	ND		1050	1000		ug/Kg	☆	96	45 ₋ 150	3	25
Di-n-octyl phthalate	ND		1050	1340		ug/Kg	₽	128	53 - 150	3	18
Benzo[a]py r ene	ND		1050	939		ug/Kg	¢	90	62 - 129	14	27
Indeno[1,2,3-cd]pyrene	ND		1050	588		ug/Kg	¢	56	52 - 146	13	30
Dibenz(a,h)anthracene	ND	0000000000000	1050	662		ug/Kg	⇔	63	59 - 139	6	29
Benzo[g,h,i]perylene	ND	F1 *-	1050	493	F1	ug/Kg	¢	47	64 ₋ 146	13	26
Carbazole	ND		1050	1010		ug/Kg	☆	97	43 - 150	22	24
1-Methylnaphthalene	ND		1050	938		ug/Kg	¢	90	69 - 120	13	24
Benzo[b]fluoranthene	ND		1050	1160		ug/Kg	☆	111	58 - 136	9	25
Benzo[k]fluoranthene	ND		1050	1190		ug/Kg	☆	113	68 - 123	3	18
bis(chloroisopropyl) ether	ND	F1 *+	1050	1450	F1	ug/Kg	☆	138	55 - 120	10	33
		MSD									
Surrogate	%Recovery	Qualifier	Limits								
2-Fluorophenol (Surr)	85		47 - 119								
Phenol-d5 (Surr)	84		59 - 120								
Nitrobenzene-d5 (Surr)	97		54 - 120								
2-Fluorobiphenyl	85		57 - 120		0017000050						
2,4,6-Tribromophenol (Surr)	67		52 - 115								
Terphenyl-d14 (Surr)	85		73 - 125								

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-345 Matrix: Solid Analysis Batch: 345300	217/1-A							Clie	ent Samp	ole ID: Method Prep Type: T Prep Batch:	otal/NA
	MB	мв									
Analyte	Result	Qualifier	RL		MDL	Unit	D	P	repared	Analyzed	Dil Fac
Gasoline	ND		5.0		2.3	mg/Kg		12/1	10/20 09:15	12/10/20 10:03	1
	MB	MB									
Surrogate	%Recovery	Qualifier	Limits					P	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		50 - 150					12/1	0/20 09:15	12/10/20 10:03	1
Lab Sample ID: LCS 580-34 Matrix: Solid	5217/2-A						Clien	t Sa		Lab Control S Prep Type: To	•
Analysis Batch: 345300										Prep Batch:	
Analysis Datch. 545500			Spike	LCS	LCS	5				%Rec.	545211
Analyte			Added	Result	Qua	lifier	Unit	D	%Rec	Limits	
Gasoline			40.0	37.3			mg/Kg		93	80 - 120	

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Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345300	45217/2 - A								Clien	nt Sa	mple ID:	Lab Cor Prep Ty Prep Ba	pe: To	tal/NA
	LCS	LCS												
Surrogate	%Recovery		ifier	Limits										
4-Bromofluorobenzene (Surr)	96			50 - 150										
								_			1D. 1 - L	Control	C	- Dun
Lab Sample ID: LCSD 580	-345217/3-A	1						C	lient Sar	mpie	ID: Lab			
Matrix: Solid												Prep Ty Prep Ba	-	
Analysis Batch: 345300				Spike		LCSD	1.09	n				%Rec.	11011. 0	RPD
				Added		Result			Unit	п	%Rec	Limits	RPD	Limit
Analyte				40.0		36.4	Qua	liller	mg/Kg		91	80 - 120	3	10
Gasoline				40.0		50.4			mgritg		51		-	
	LCSD													
Surrogate	%Recovery	Qual	ifier	Limits										
4-Bromofluorobenzene (Surr)	98			50 - 150										
Method: NWTPH-Dx - N	lorthwest	- Se	emi-Vo	latile P	etr	oleum	ו Pr	odu	cts (GC)				
Lab Sample ID: MB 580-34	6049/1-A									Clie	ent Samp	ole ID: M	ethod	Blank
Matrix: Solid												Prep Ty		
Analysis Batch: 346129												Prep Ba		
		ΜВ	мв									-		
Analyte	Re	sult	Qualifier		RL		MDL	Unit	D		repared	Analy		Dil Fac
#2 Diesel (C10-C24)		ND			50		12	mg/K	3	12/2	21/20 08:35	12/21/20	19:54	1
Motor Oil (>C24-C36)		ND			50		18	mg/K	3	12/2	21/20 08:35	12/21/20	19:54	1
		MB	мв											
			Qualifier	Limi	<i>tc</i>					P	repared	Analy	zed	Dil Fac
Surrogate	%Reco	101	Qualifier	50 - 1							21/20 08:35			1
o-Terphenyl		101		00-										
Lab Sample ID: LCS 580-3	46049/2-A								Clien	it Sa	mple ID:	Lab Cor	ntrol S	ample
Matrix: Solid												Prep Ty		
Analysis Batch: 346129												Prep Ba	itch: 3	46049
				Spike		LCS	LCS	;				%Rec.		
Analyte				Added		Result	Qua	lifier	Unit	D	%Rec	Limits		
#2 Diesel (C10-C24)				500		458			mg/Kg		92	70 - 125		
Motor Oil (>C24-C36)				500		445			mg/Kg		89	70 - 129		
	105	LCS												
Current and the	%Recovery			Limits										
Surrogate o-Terphenyl	83	Quar		50 - 150										
O-Terphenyr	00			00-700										
Lab Sample ID: LCSD 580	-346049/3-A							C	lient Sar	mple	ID: Lab	Control	Sampl	e Dup
Matrix: Solid												Prep Ty		
Analysis Batch: 346129												Prep Ba	itch: 3	46049
				Spike		LCSD	LCS	D				%Rec.		RPD
Analyte				Added		Result	Qua	lifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)				500		486			mg/Kg		97	70 - 125	6	16
Motor Oil (>C24-C36)				500		479			mg/Kg		96	70 - 129	7	16
	LCSD	100	n											
Sumonoto	%Recovery			Limits										
Surrogate o-Terphenyl	93	gudi		50 - 150										
o-reipitelly	30			55-100										

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Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-99765 Matrix: Solid Analysis Batch: 346129	5-A-1-E MS Sample	Some		Spike		MS	MS			CI	lient San	nple ID: Mat Prep Type: Prep Batcl %Rec.	Tota	al/N
Amelia.	_	-		-				1242	11-14		N/Dee			
Analyte	Result			Added		Result			Unit	= D #	%Rec	Limits		
#2 Diesel (C10-C24)	2500			1420		3180	F1		mg/Kg		50	70 - 125		
Motor Oil (>C24-C36)	4700			1420		5920			mg/Kg	¢	84	70 - 129		
Surrogate	MS %Recovery	MS Quali	flor	Limits										
		Quan	//e/		t:									
o-Terphenyl	78			50_150										
Lab Sample ID: 580-99769 Matrix: Solid	5-A-1-F MSD)							Client S	amp	le ID: Ma	atrix Spike I Prep Type:	Tota	al/N
Analysis Batch: 346129		_		• •				_				Prep Batch	1: 34	
	Sample	-		Spike		MSD						%Rec.		RP
Analyte	Result	·	fier	Added		Result			Unit	D	%Rec		PD	Lin
#2 Diesel (C10-C24)	2500			1430		3400			mg/Kg	₿	65	70 - 125	7	1
Motor Oil (>C24-C36)	4700	F1		1430		6650	F1		mg/Kg	☆	135	70 - 129	12	
	MSD	MSD												
Surrogate	%Recovery	Quali	fier	Limits										
o-Terphenyl	85	-		50 - 150	-									
Analyte #2 Diesel (C10-C24)	Sample Result ND	-				Result ND			Unit mg/Kg	D ×			PD NC	RF Lin
Motor Oil (>C24-C36)	29	J				36.3	J		mg/Kg	⋩			21	3
	DU	DU												
Surrogate	%Recovery	Quali	fier	Limits										
o-Terphenyl	89	-		50 - 150	- C									
lethod: 6020B - Metal	s (ICP/MS)												
Lab Sample ID: MB 580-3 Matrix: Solid	45820/21-A									Clie	ent Samp	ole ID: Meth Prep Type: Prep Batch	Tota	al/N
												•		
Analysis Batch: 345924		MB N								-	repared	Analyzed	Г	Dil Fa
Analysis Batch: 345924 _{Analyte}	Re	sult C	//B Qualifier		RL			Unit	D		-		_	
Analysis Batch: 345924 Analyte Lead	Re	ND			0.50	0	.048	mg/Kg		12/1	7/20 12:22	12/18/20 12:0	4	1
Analysis Batch: 345924 Analyte Lead	Re	ND ND			0.50 0.80	0	.048 .077	mg/Kg mg/Kg		12/1 12/1	7/20 12:22 7/20 12:22	12/18/20 12:0 12/18/20 12:0	4 4	
Analysis Batch: 345924 Analyte Lead Cadmium	Re	ND			0.50	0	.048 .077	mg/Kg		12/1 12/1	7/20 12:22 7/20 12:22	12/18/20 12:0	4 4	
Analysis Batch: 345924 Analyte Lead Cadmium Arsenic	Re	ND ND		<u>.</u>	0.50 0.80	0	.048 .077 0.10	mg/Kg mg/Kg		12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22	12/18/20 12:0 12/18/20 12:0	4 4 4	
Analysis Batch: 345924 Analyte Lead Cadmium Arsenic Chromium Lab Sample ID: LCS 580-3 Matrix: Solid		ND ND ND ND ND		_,	0.50 0.80 0.50	0	.048 .077 0.10	mg/Kg mg/Kg mg/Kg		12/1 12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 nple ID:	12/18/20 12:0 12/18/20 12:0 12/18/20 12:0	4 4 4 4	mp
Matrix: Solid Analysis Batch: 345924 Analyte Lead Cadmium Arsenic Chromium Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345924		ND ND ND ND ND			0.50 0.80 0.50	0	.048 .077 0.10 .063	mg/Kg mg/Kg mg/Kg mg/Kg		12/1 12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 nple ID:	12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 Lab Contro Prep Type: Prep Batch	4 4 4 1 Sa Tota	mpl al/N
Analysis Batch: 345924 Analyte Lead Cadmium Arsenic Chromium Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345924		ND ND ND ND ND		Spike	0.50 0.80 0.50	0 0 0	.048 .077 0.10 .063	mg/Kg mg/Kg mg/Kg mg/Kg		12/1 12/1 12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22	12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 Lab Contro Prep Type: Prep Batch %Rec.	4 4 4 1 Sa Tota	mpl al/N
Analysis Batch: 345924 Analyte Lead Cadmium Arsenic Chromium Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345924		ND ND ND ND ND		Spike Added	0.50 0.80 0.50	0	.048 .077 0.10 .063	mg/Kg mg/Kg mg/Kg mg/Kg		12/1 12/1 12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 nple ID:	12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 Lab Contro Prep Type: Prep Batch	4 4 4 1 Sa Tota	mpl al/N
Analysis Batch: 345924 Analyte Lead Cadmium Arsenic Chromium Lab Sample ID: LCS 580-3 Matrix: Solid		ND ND ND ND ND		•	0.50 0.80 0.50	0 0 0	.048 .077 0.10 .063	mg/Kg mg/Kg mg/Kg mg/Kg lifier	Clien	12/1 12/1 12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 nple ID: %Rec	12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 Lab Contro Prep Type: Prep Batch %Rec.	4 4 4 1 Sa Tota	mpl al/N
Analysis Batch: 345924 Analyte Lead Cadmium Arsenic Chromium Lab Sample ID: LCS 580-3 Matrix: Solid Analysis Batch: 345924 Analyte		ND ND ND ND ND		Added	0.50 0.80 0.50	0 0 LCS Result	.048 .077 0.10 .063	mg/Kg mg/Kg mg/Kg mg/Kg lifier	Clien	12/1 12/1 12/1 12/1 12/1	7/20 12:22 7/20 12:22 7/20 12:22 7/20 12:22 nple ID: %Rec	12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 12/18/20 12:0 Lab Contro Prep Type: Prep Batch %Rec. Limits	4 4 4 1 Sa Tota	mpl al/N

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Lab Sample ID: LCS 580-345 Matrix: Solid	820/22 - A					Clier	nt Sar	nple ID	: Lab Con Prep Tyj Prep Ba	pe: Tot	al/NA
Analysis Batch: 345924									•	itch: 54	+3020
			Spike		LCS		_		%Rec.		
Analyte			Added		Qualifier	Unit	<u>D</u>	%Rec	Limits		
Chromium		0	50.0	52.4		mg/Kg	and th	105	80 - 120		
Lab Sample ID: LCSD 580-34 Matrix: Solid	5820/23-	Α			C	lient Sa	mple	ID: Lab	Control S Prep Ty	pe: Tot	al/NA
Analysis Batch: 345924									Prep Ba	tch: 34	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ead			50.0	52.4		mg/Kg	_	105	80 - 120	1	20
Cadmium			50.0	51.3		mg/Kg		103	80 - 120	1	20
Arsenic			50.0	52.1		mg/Kg		104	80 - 120	1	20
Chromium			50.0	52.9		mg/Kg		106	80 - 120	1	20
Lab Sample ID: 580-99593-1 Matrix: Solid Analysis Batch: 345924	MS						С	lient Sa	ample ID: Prep Ty Prep Ba	pe: Tot	al/NA
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
_ead	9.0		39.4	56.2		mg/Kg	¢	120	80 - 120		
Cadmium	0.11	J	39.4	47.4		mg/Kg	¢	120	80 - 120		
Arsenic	6.2	-	39.4	49.2		mg/Kg	¢	109	80 - 120		
Chromium	26	a la da construir de la del	39.4	68.1		mg/Kg	¢	107	80 - 120		
Lab Sample ID: 580-99593-1	MSD						с	lient Sa	ample ID:	20-C02	25780
Matrix: Solid Analysis Batch: 345924									Prep Ty Prep Ba	pe: Tot	al/NA
Analysis Baton. 540024	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ead	9.0		39.8	49.0		mg/Kg	×	100	80 - 120	14	20
Cadmium	0.11	.1	39.8	40.1		mg/Kg	¢	100	80 - 120	17	20
Arsenic	6.2		39.8	43.8		mg/Kg	¢	95	80 - 120	12	20
Chromium	26	8 RO I D- O- D-	39.8	62.2		mg/Kg	¢	91	80 - 120	9	20
_ab Sample ID: 580-99593-1 Matrix: Solid	DU						С	lient Sa	ample ID: Prep Ty	pe: Tot	al/NA
Analysis Batch: 345924									Prep Ba	tch: 34	
-	Sample	Sample		DU	DU						RPD
Analyte		Qualifier			Qualifier	Unit	D			RPD	Limit
ead	9.0			8.90		mg/Kg	¢			1	20
Cadmium	0.11	J		0.111	J	mg/Kg	₽			5	20
Arsenic	6.2			5.86		mg/Kg	₽			5	20
Chromium	26			24.3		mg/Kg	₽		01-100	7	20
ethod: 7471A - Mercury		1									

Lab Sample ID: MB 580-345513 Matrix: Solid Analysis Batch: 345714					-	le ID: Method Prep Type: To Prep Batch: 3	otal/NA		
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030	0.0090	mg/Kg		12/14/20 13:46	12/15/20 11:53	1

Job ID: 580-99593-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 580-3	45513/23 - A					Clien	nt Sar	nple ID	: Lab Con Prep Ty		
Matrix: Solid									Prep Ty Prep Ba		
Analysis Batch: 345714			Spike	1.09	LCS				%Rec.		10010
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Mercury			0.167	0.170		mg/Kg		102	80 - 120		
Lab Sample ID: LCSD 580	-345513/24-	Α			C	lient Sa	mple	ID: Lat	Control	Sample	e Dup
Matrix: Solid									Prep Ty		
Analysis Batch: 345714									Prep Ba	tch: 34	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Mercury			0.167	0.168		mg/Kg		101	80 - 120	1	20
Lab Sample ID: 580-99593	-1 MS						С	lient Sa	ample ID:	20-C02	25780
Matrix: Solid									Prep Ty	pe: Tot	al/NA
Analysis Batch: 345714									Prep Ba	tch: 34	45513
·······	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Mercury	0.022		0.120	0.157		mg/Kg	¢	113	80-120		
Lab Sample ID: 580-99593	-1 MSD						с	lient S	ample ID:	20-C02	25780
Matrix: Solid									Prep Ty		
Analysis Batch: 345714									Prep Ba		
· · · · · · · · · · · · · · · · · · ·	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Мегсигу	0.022		0.122	0.167	- And all second	mg/Kg	¢	119	80 - 120	6	20
Lab Sample ID: 580-99593	-1 DU						С	lient S	ample ID:	20-C02	25780
Matrix: Solid									Prep Ty		
Analysis Batch: 345714									Prep Ba	tch: 34	45513
	Sample	Sample		DU	DU				•		RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
Mercury	0.022			0.0241		mg/Kg				8	20

Lab Sample ID: 580-99605-/ Matrix: Solid Analysis Batch: 345181	4-5 DU						Client Sample ID: Dup Prep Type: Tot	
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	77.3		77.4		%		0.09	20
Percent Moisture	22.7		22.6		%		0.3	20

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Client Sample ID: 20-C025780

Date Collected: 12/07/20 12:30 Date Received: 12/08/20 14:44

Lab	Sample	ID:	580-99593-1
	-		Matrix: Solid

Lab Sample ID: 580-99593-1

Matrix: Solid

Matrix: Solid

Percent Solids: 94.8

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	345181	12/09/20 15:39	S1S	TAL SEA

Client Sample ID: 20-C025780

Date Collected: 12/07/20 12:30 Date Received: 12/08/20 14:44

S.	Batch	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Prep Type Total/NA	Prep	5035			345397	12/08/20 15:00		TAL SEA
Total/NA	Analysis	8260D		1	345537	12/11/20 22:03	CJB	TAL SEA
Total/NA	Prep	3546			345374	12/11/20 15:17	S1S	TAL SEA
Total/NA	Analysis	8270E		1	345574	12/15/20 18:39	W1T	TAL SEA
Total/NA	Prep	5035			345217	12/10/20 09:15	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345300	12/10/20 12:30	CJ	TAL SEA
Total/NA	Prep	3546			346049	12/21/20 08:35	ССН	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	346129	12/21/20 22:14	ADB	TAL SEA
Total/NA	Prep	3050B			345820	12/17/20 12:22	JCP	TAL SEA
Total/NA	Analysis	6020B		10	345924	12/18/20 12:11	FCW	TAL SEA
Total/NA	Prep	7471A			345513	12/14/20 13:46	JCP	TAL SEA
Total/NA	Analysis	7471A		1	345714	12/15/20 11:59	FCW	TAL SEA

Client Sample ID: 20-C025781

Date Collected: 12/07/20 08:30 Date Received: 12/08/20 14:44

-	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	345181	12/09/20 15:39	S1S	TAL SEA

Client Sample ID: 20-C025781 Date Collected: 12/07/20 08:30 Date Received: 12/08/20 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			345397	12/08/20 15:00	ASJ	TAL SEA
Total/NA	Analysis	8260D		1	345537	12/11/20 22:29	CJB	TAL SEA
Total/NA	Prep	3546			345374	12/11/20 15:17	S1S	TAL SEA
Total/NA	Analysis	8270E		1	345574	12/15/20 19:02	W1T	TAL SEA
Total/NA	Prep	5035			345217	12/10/20 09:15	JSM	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	345300	12/10/20 12:54	CJ	TAL SEA
Total/NA	Prep	3546			346049	12/21/20 08:35	CCH	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	346129	12/21/20 22:54	ADB	TAL SEA
Total/NA	Prep	3050B			345820	12/17/20 12:22	JCP	TAL SEA
Total/NA	Analysis	6020B		10	346045	12/18/20 17:00	FCW	TAL SEA
lotal/NA	Prep	7471A			345513	12/14/20 13:46	JCP	TAL SEA
Total/NA	Analysis	7471A		1	345714	12/15/20 12:08	FCW	TAL SEA

Lab Sample ID: 580-99593-2 Matrix: Solid

Matrix: Solid

Percent Solids: 93.9

Lab Sample ID: 580-99593-2

Client: Cascade Analytical Inc Project/Site: ANS Geo

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Job ID: 580-99593-1

and a

No.

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Pr	ogram	Identification Number	Expiration Date
Vashington	Sta	ate	C553	02-18-21
The following analyte:	s are included in this repo	ort but the laboratory is r	ot certified by the governing authority	This list may include analytes for which
the agency does not o		int, but the laboratory is t	to certified by the governing durinity.	
• •		Matrix	Analyte	
the agency does not o	offer certification.			

Client: Cascade Analytical Inc Project/Site: ANS Geo

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-99593-1	20-C025780	Solid	12/07/20 12:30	12/08/20 14:44	
580-99593-2	20-C025781	Solid	12/07/20 08:30	12/08/20 14:44	

Eurofins TestAmerica, Seattle

Eurofins TestAmerica, Seattle

5755 8th Sireet East

Chain of Custody Record Sample Origin: State of WA

Control Environment Texting TestAmerica

Tacoma, WA 98424-1317 phone 253.922.2310 fax 253.922.5047	Requ	latory Pro	ogram: i					Dal	20	the am				Test	Amout			rian ina d	ihin Euro	Con Track	
		lanager: A		-		1		KA	C OI	BIEL:				1690	MI TIQT L	ia Lai	orato	ries, inc. d		mins lesua	menca
Client Contact	Concernance of the second s	drewschu			0	Site	0	itaci	t: Sar	20			Data	12/7/20				TALS Pro			
Eurofins Cascade Analytical, Union Gap	Tel: 509-4		all carolin	1303.001		-	Cor	-		140				r: UPS				COC NO	of	COCs	-
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Union Gap				RKING DAY	15	11									- 7		080	L' Sample		New York	
(509) 452-7707 Phone		T if different f				1 1	2									195	93	Refer to	note be	ow.	
(xxx) xxx-xxxx FAX	⊡		weeks		-			r i							99593				For Lab Use Only: Walk-in Client:		
Project Name: ANS Geo			l week			5												Lab Sampling;			
Site:			days			je je															Section 1.
P O # 017005	i day													1 1	1211			Job / SDC	NO.:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Çont.	Filtered Sample (Y/N)	8260 D SIM	8270 C SIN	NWTPH-Dx	MTCA-5 Metals								Sa	mple Spe	cific Notes:	
20-C025780	7-Dec	12:30	G	s	4		x	x	x x	x											
20-C025781	12/7/20	8:30	G	S	4	П				x						-					
							1.	10 1			++		-			1		1		1.57	
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)-99593 CI	nain of Cu	stody		-										Co Pa Cu	oler E cking: <u>st. S</u> e	osc: al: Yes	Cor: Styrobo but	Fed TPS	Unc: <u>0</u> Ex:	
				7 9	0					1		++			- Bh	ie Ice)	Wet,	Dry, None	Oth	er;	
I attest to the validity and authenticity of this (these) sample(s). I am aware that to ignature:	ampering with Date	or intentiona	ây mislabeling	g the sampi	le(s) loca	tion, d	ate or	time (of colle	iction r	may be c	onsidere	ed fraud	and subje	act to le	gal actio	n (NAC-	445.0636)			\neg
Preservation Used: 1= ice, 2= HCI; 3= H2SO4; d=HNO3; 5=)		Other		10000		T			1011		1	TT	11 1000	2515 Vest	1225	12233	USE SER	-		a de la competencia	BOUNDED.
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please Li Comments Section if the lab is to dispose of the sample.	NAMES OF BRIDE STOCK	and the second second	odes for the	e sample	in the	S	ampl	e Di	sposi	a) (A	fee m	ay be	asses	sed if s	ample	s are	retain	ed onger ti	ian 1 mo	nth)	128030771
Non-Hazard Rammable Skin Imitant	D Poison B		Unknow	wn				eturn	to Clier	nŧ		Disp	osal by I	ab	C	Archiv	e for	Mai	nths		
ipecial Instructions/QC Requirements & Comments: Drinking) water sa	mples for a	compliand	ce with C	regon	Heal	ith A	utho	rity.	Plea	se rep	ort to (Orego	n state.							
	Custody Se								Coole	r Ten	pp. (°C): Obs'	d:	*****	Corrd	-		Therm ID		******	-
Relinquished by: Junes King	Company:	Cuscade	e -Uh	Date/Tin	ne:	R	eceiv		y: Tan	Bl	ant		51	Compa	ny: A	Sea		Date/Time:	18/20	Kiti	
keiinquished by	Company:			Date/Tin			eceiv				<u>`</u>	\overline{O}		Compa	ny:			Date/Time:			
Relinquished By:	Company:			Date/Tin	ne:	R	ecelv	ed in	Labo	orato	ry by:			Compa	ny:			Date/Time:			

Form No. CA-C-WI-004, Rev. 1.22, dated 12/3/2019

and the second

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Login Sample Receipt Checklist

Client: Cascade Analytical Inc

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Login Number: 99593 List Number: 1 Creator: Hobbs, Kenneth F

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 580-99593-1

List Source: Eurofins TestAmerica, Seattle

Eurofins TestAmerica, Seattle

5755 8th Street East

Chain of Custody Record Sample Origin: State of WA

eurofins Environment Testing TestAmerica

Project Manager: Andy Solut The Project Amager: Andy Solut The Sequence Amager: Amage	Tacoma, WA 98424-1317 phone 253.922.2310 fax 253.922.5047	Regulatory Program: DW DNPDES					; г	T RC	RA	নি	Other:					Tes	stAme	rica	abor	atori	ories, Inc. d/b/a Eurofins TestAmer		
Client Contact Email: and/executingue/functional context Site: Contact: Same Date: 127/20 COC No:							1				ound i												
Eurofine Cascade Analytical. Unline Gap Tel: 890-462-7707 Lab Contract: Carrier: UPS of COCs 0000 W Ahamm Rd Sie 2 Image: Contract Cascade Analytical Unline Gap Image:	Client Contact	-					Site	Co	ntact	- Sa	ame			Tr)ate:	12/7/	20			-			
1008 W Attamum Rd Sig 2 Analysis Turnaround Time File Sampler				(Georgenie	100.0011		-	_			1110		-	_								COCs	
Union Gap CALEDRA LONS Concentration The definition The definitio				urnaround	Time		T	T	T	T	T T	Т					Ť	T		1			
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Project Name: ANS Geo		1																				<u>.</u>	
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20-C025780 7-Dec 12:30 G S 4 x	Sample Identification				Matrix	# of	l∰]		54	Įξ	151	Ę									Samala Sa	naifia Noti	
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Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Image:	¹ I attest to the validity end euthenticity of this (these) sample(s). I am aware that Signature:	t tampering wi Date	th or intention	all <u>y</u> mislabelin	ig the sam	ple(s) loc	cation,	date	or tim	e of c	collect	ion m	ay be co	onsider	ed frau	id and	subject	to lega	al action	(NAC	445.0636)		
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Attachment G

Seismic Support Data





ASCE 7 Hazards Report

Address: No Address at This Location Standard: ASCE/SEI 7-16

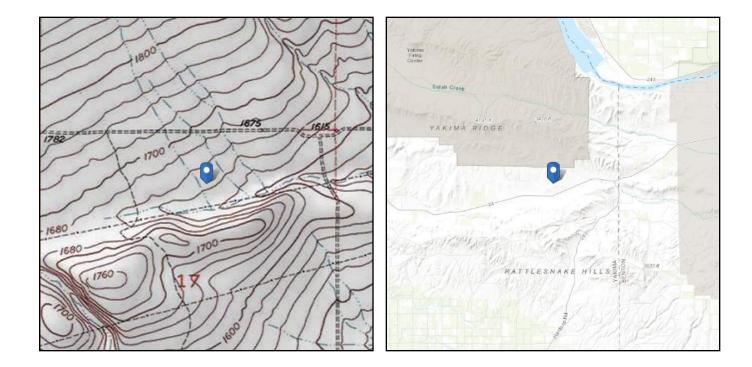
Risk Category: II Soil Class: C

II L C - Very Dense L Soil and Soft Rock

 Elevation:
 0 ft (NAVD 88)

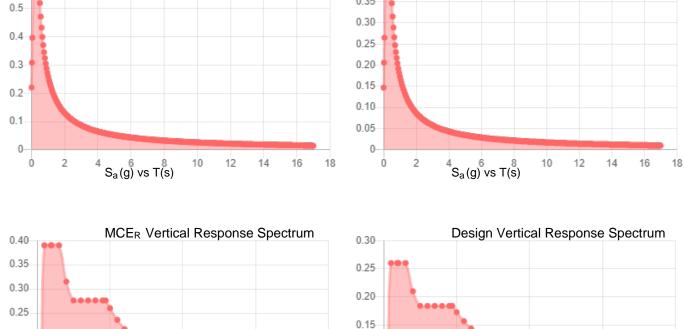
 Latitude:
 46.531375

 Longitude:
 -119.967774





Site Soil Class: Results:	C - Very Dense	Soil and Soft Rock	
S _s :	0.425	S _{D1} :	0.173
S ₁ :	0.173	T∟ :	16
F _a :	1.3	PGA :	0.19
F _v :	1.5	PGA M:	0.23
S _{MS} :	0.552	F _{PGA} :	1.21
S _{M1} :	0.26	l _e :	1
S _{DS} :	0.368	C _v :	0.883
Seismic Design Catego	ry C		
0.6 MCE _R Response Spectrum		0.40	Design Response Spectrum
0.5		0.35	
0.5		0.30	
0.4		0.25	
0.3		0.20	



0.10

0.05

0

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0.5 S_a(g) vs T(s) ^{1.0}

0.20

0.15

0.10

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Data Accessed:

Date Source:

Fri Jan 08 2021

1.5

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

0.5 S_a(g) vs T(s)

2.0

1.5

2.0



The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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