

APPENDIX B
Chemical Analytical Laboratory Reports
and Data Validation Report

Project:	Avista – Mission Service Center Garage July, August and September 2018 Soil Samples; and August, October and November 2018 Water Samples
GEI File No:	02522-079-01
Date:	December 11, 2018

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA 2009) of analytical data from the analyses of soil and water samples collected as part of the July, August, September, October, and November 2018 sampling events, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Spokane Service Center Garage on the Avista Corporation Spokane campus located at 1411 East Mission Avenue in Spokane, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2016a) and Inorganic Superfund Data Review (EPA 2016b) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix A of the Work Plan, Groundwater Monitoring, Remedial Excavation and Geosynthetic Liner Installation (GeoEngineers 2018), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries
- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates

- Laboratory/Field Duplicates
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-9069-1	Bay 7 (3-3.5)
590-9188-1	MW-1:082018, MW-2:081718, MW-3:081718, MW-4:081718, MW-5A:081718
590-9296-1	TP-1(3-4), TP-1(11-12), TP-2(3-4), TP-2(11-12), TP-3(3-4), TP-3(11-12), TP-4(12-13), TP-5(9-10)
590-9328-1	EX-1-E (8-9), EX-2-E (8-9), EX-3-E (8-9), EX-4-E (8-9), EX-5-E (8-9), EX-6-N (3-4)
590-9344-1	Bay-1 (18-19), Bay-1/2 W (15-16), Bay-2 (19-20), Bay-3 (17-18), Bay-4 (15-16), Bay-5 (18-19), Bay-5/7 (12-13), Bay-7 (23-24)
590-93711	EX-7-E (12-13), EX-8-S (12-13), EX-9-W (12-13), EX-10-W (12-13), EX-11-W (12-13), EX-12-W (12-13), EX-13-W (12-13), EX-14-E (12-13), EX-15-E (12-13), EX-16-E (12-13), EX-17-E (12-13), EX-18-E (8-9), EX-19-E (8-9)
590-9393-1	EX-20-W (8-9), EX-21-W (8-9), EX-22-W (4-5), EX-23-N (3-4), EX-24-E (4-5), EX-25-E (8-9), EX-26-E (8-9), EX-27-B (9-10), EX-28-B (9-10), EX-29-B (4-5)
590-9656-1	MW-1:101018, DUP:101018, MW-2:101018, MW-3:101018, MW-4:101018, MW-5A:101018
590-9956-1	MW-1:112018

CHEMICAL ANALYSIS PERFORMED

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Polycyclic Aromatic Hydrocarbons (PAHs) by Method SW8270D-SIM;
- Polychlorinated Biphenyls (PCBs) by Method SW8082A; and
- Total Metals by Method EPA6010C/7471B

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis, with the exception noted below. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

SDG 590-9344-1: The sample cooler temperature recorded at the laboratory was 1.7 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, this temperature should not affect the sample analytical results.

SDG 590-9371-1: The sample cooler temperature recorded at the laboratory was 7.8 degrees Celsius. It was determined through professional judgment that since the samples were received on ice at the laboratory the same day they were collected, and the cooling process had begun, this temperature should likely not affect the sample analytical results.

SDG 590-9656-1: The sample cooler temperature recorded at the laboratory was 0.8 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, this temperature should not affect the sample analytical results.

(PAHs) The 7-day holding time for PAH analysis was exceeded by eleven days in Sample DUP:101018. The reporting limits for the PAH target analytes were qualified as estimated (UJ) in this sample.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-9296-1: (NWTPH-Dx) The percent recovery for surrogate n-Triacontane-d62 was outside the control limits in Sample TP-5(9-10), because of sample dilution (20X). The surrogates are added to the sample when it is extracted. If the sample is diluted 10X or more, recovery of the surrogates is often not possible because it is also diluted below the linear calibration range of the instrument. No action was required for this outlier.

SDG 590-9328-1: (PAHs) The percent recovery for surrogate p-Terphenyl-d14 was less than the control limits in Sample EX-6-N (3-4); however, the sample was spiked with two additional surrogates, each within the control limits. No action was required for this outlier.

SDG 590-9344-1: (NWTPH-Dx) The percent recovery for surrogate n-Triacontane-d62 was outside the control limits in Sample Bay-7 (23-24), because of sample dilution (20X). The surrogates are added to the sample when it is extracted. If the sample is diluted 10X or more, recovery of the surrogates is often not possible because it is also diluted below the linear calibration range of the instrument. No action was required for this outlier.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-9069-1: (Total Metals) The laboratory performed an MS/MSD sample set on Sample Bay 7 (3-3.5). The percent recovery for total barium was greater than the control limits in the MS and the percent recovery for total zinc was greater than the control limits in the MSD digested on 8/6/2018; however, the percent recoveries for these target analytes were within the control limits in the corresponding MSD and MS. No action was required for these outliers.

SDG 590-9296-1: (NWTPH-Dx) The laboratory performed an MS/MSD sample set on Sample TP-2(3-4). The RPD for lube oil-range hydrocarbons was greater than the control limit in the MS/MSD extracted on 9/5/2018. The positive result for this target analyte was qualified as estimated (J) in Sample TP-2(3-4).

Additionally, in the same MS/MSD sample set, the percent recovery for diesel-range hydrocarbons was less than the control limits in the MS; however, the percent recovery for this target analyte was within the control limits in the corresponding MSD. No action was required for this outlier.

(PAHs) The laboratory performed an MS/MSD sample set on Sample TP-1(3-4). The percent recoveries for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and pyrene were less than the control limits and the RPD values for acenaphthene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, chrysene, fluoranthene,

indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene were greater than the control limits in the MS/MSD sample set extracted on 9/5/2018. The positive results for these target analytes were qualified as estimated (J) in Sample TP-1(3-4).

Additionally, in the same MS/MSD sample set, the percent recoveries for acenaphthene, anthracene, benzo[g,h,i]perylene, chrysene, fluorene, fluoranthene, indeno[1,2,3-cd]pyrene, and phenanthrene were less than the control limits in the MSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding MS. No action was required for these outliers.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exceptions:

SDG 590-9069-1: (Total Metals) The laboratory performed a laboratory duplicate sample set on Sample Bay 7 (3-3.5). The RPD for total barium was greater than the control limit in the laboratory duplicate sample set digested on 8/6/2018. The positive result for this target analyte was qualified as estimated (J) in Sample Bay 7 (3-3.5).

SDG 590-9296-1: (NWTPH-Dx) The laboratory performed a laboratory duplicate sample set on Sample TP-1(11-12). The RPD values for diesel- and lube oil-range hydrocarbons were greater than the control limits in the laboratory duplicate sample set extracted on 9/5/2018. The positive results for these target analytes were qualified as estimated (J) in Sample TP-1(11-12).

Field Duplicates (FDs)

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of

the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 20 percent.

SDG 590-9656-1: One field duplicate sample pair, MW-1:101018 and DUP:101018, was submitted with this SDG. The precision criteria for all target analytes were met for this sample pair.

MISCELLANEOUS

SDG 590-9296-1: (NWTPH-Dx) The positive result for diesel-range hydrocarbons in Sample TP-1(3-4) appears to be due to heavily weathered diesel and/or a light weight oil, as well as biogenic interference in the sample. The positive results for diesel-range hydrocarbons in Samples TP-2(3-4), TP-2(11-12), and TP-5(9-10) appear to be due to heavily weathered diesel and/or a light weight oil in the samples. The positive result for diesel-range hydrocarbons in Sample TP-1(11-12), appears to be due to a creosote similar product in the sample. For these reasons, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

SDG 590-9328-1: (NWTPH-Dx) The positive results for diesel-range hydrocarbons in Samples EX-1-E (8-9), EX-3-E (8-9), EX-5-E (8-9), and EX-6-N (3-4) appear to be due to a light weight oil in the samples. The positive result for diesel-range hydrocarbons in Sample EX-2-E (8-9) appears to be due to a light weight oil, as well as a creosote similar product in the sample. For these reasons, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

SDG 590-9344-1: (NWTPH-Dx) The positive results for diesel-range hydrocarbons in Samples Bay-1 (18-19), Bay-1/2 W (15-16), Bay-2 (19-20), Bay-4 (15-16), Bay-5 (18-19), Bay-5/7 (12-13), and Bay-7 (23-24) may be influenced by the relative concentration of lube oil-range hydrocarbons in the samples. For this reason, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

SDG 590-9371-1: (NWTPH-Dx) The positive result for diesel-range hydrocarbons in Sample EX-8-S (12-13) appears to be due to heavily weathered diesel in the sample. The positive results for diesel-range hydrocarbons in Samples EX-7-E (12-13) and EX-12-W (12-13) may be influenced by the relative concentration of lube oil-range hydrocarbons in the samples. For these reasons, the positive results for diesel-range hydrocarbons were qualified as estimated (J) in these samples, in order to signify a potential high bias.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2. SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
Bay-1 (18-19)	Diesel-range hydrocarbons	J	See Miscellaneous
Bay-1/2 W (15-16)	Diesel-range hydrocarbons	J	See Miscellaneous
Bay-2 (19-20)	Diesel-range hydrocarbons	J	See Miscellaneous
Bay-4 (15-16)	Diesel-range hydrocarbons	J	See Miscellaneous
Bay-5 (18-19)	Diesel-range hydrocarbons	J	See Miscellaneous
Bay-5/7 (12-13)	Diesel-range hydrocarbons	J	See Miscellaneous
Bay 7 (3-3.5)	Total barium	J	Laboratory Duplicate RPD
Bay-7 (23-24)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-1-E (8-9)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-2-E (8-9)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-3-E (8-9)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-5-E (8-9)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-6-N (3-4)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-7-E (12-13)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-8-S (12-13)	Diesel-range hydrocarbons	J	See Miscellaneous
EX-12-W (12-13)	Diesel-range hydrocarbons	J	See Miscellaneous
TP-1(3-4)	Acenaphthene	J	MS/MSD RPD
	Anthracene	J	MS/MSD RPD
	Benzo[a]anthracene	J	MS/MSD Recovery and RPD
	Benzo[a]pyrene	J	MS/MSD Recovery and RPD
	Benzo[b]fluoranthene	J	MS/MSD Recovery and RPD
	Benzo[g,h,i]perylene	J	MS/MSD RPD
	Benzo[k]fluoranthene	J	MS/MSD Recovery
	Chrysene	J	MS/MSD RPD
	Diesel-range hydrocarbons	J	See Miscellaneous
	Fluoranthene	J	MS/MSD RPD
	Indeno[1,2,3 cd]pyrene	J	MS/MSD RPD
	Phenanthrene	J	MS/MSD RPD
	Pyrene	J	MS/MSD Recovery and RPD
TP-1(11-12)	Diesel-range hydrocarbons	J	Laboratory Duplicate RPD/See Miscellaneous
	Lube oil-range hydrocarbons	J	Laboratory Duplicate RPD
TP-2(3-4)	Diesel-range hydrocarbons	J	See Miscellaneous
	Lube oil-range hydrocarbons	J	MS/MSD RPD
TP-2(11-12)	Diesel-range hydrocarbons	J	See Miscellaneous
TP-5(9-10)	Diesel-range hydrocarbons	J	See Miscellaneous
DUP:101018	All PAH target analytes	UJ	Holding Time

REFERENCES

- GeoEngineers, Inc. "Work Plan, Groundwater Monitoring, Remedial Excavation and Geosynthetic Liner Installation," prepared for Avista Corporation. August 2, 2018.
- U.S. Environmental Protection Agency (EPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.
- U.S. Environmental Protection Agency (EPA), 2016a. "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," EPA-540-R-2016-002. September 2016.
- U.S. Environmental Protection Agency (EPA), 2016b. "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," EPA-540-R-2016-001. September 2016.

TestAmerica

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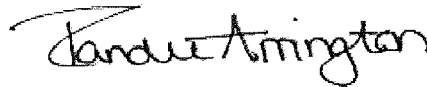
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9069-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
8/10/2018 11:18:00 AM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

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

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Job ID: 590-9069-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The sample was received on 8/3/2018 4:15 PM; the sample arrived in good condition. The temperature of the cooler at receipt was 7.9° C.

Metals

Method 6010C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 590-18113 and analytical batch 590-18136 was outside control limits. Sample non-homogeneity is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9069-1	Bay 7 (3-3.5)	Solid	07/09/18 15:40	08/03/18 16:15

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Client Sample ID: Bay 7 (3-3.5)

Date Collected: 07/09/18 15:40

Date Received: 08/03/18 16:15

Lab Sample ID: 590-9069-1

Matrix: Solid

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		9.7		mg/Kg		08/06/18 09:05	08/06/18 15:43	10
Barium	56	F1	9.7		mg/Kg		08/06/18 09:05	08/06/18 15:43	10
Cadmium	ND		7.8		mg/Kg		08/06/18 09:05	08/06/18 15:43	10
Chromium	12		9.7		mg/Kg		08/06/18 09:05	08/06/18 15:43	10
Selenium	ND		39		mg/Kg		08/06/18 09:05	08/06/18 15:43	10
Silver	ND		9.7		mg/Kg		08/06/18 09:05	08/06/18 15:43	10
Zinc	67	F1	39		mg/Kg		08/06/18 09:05	08/06/18 15:43	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		41		ug/Kg		08/06/18 09:39	08/06/18 13:59	1

Client Sample ID: Bay 7 (3-3.5)

Date Collected: 07/09/18 15:40

Date Received: 08/03/18 16:15

Lab Sample ID: 590-9069-1

Matrix: Solid

Percent Solids: 97.1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	20		4.8		mg/Kg	✱	08/08/18 14:27	08/09/18 12:23	2

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 590-18113/2-A
 Matrix: Solid
 Analysis Batch: 18136

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18113

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		1.3		mg/Kg		08/06/18 09:05	08/06/18 15:40	1
Barium	ND		1.3		mg/Kg		08/06/18 09:05	08/06/18 15:40	1
Cadmium	ND		1.0		mg/Kg		08/06/18 09:05	08/06/18 15:40	1
Chromium	ND		1.3		mg/Kg		08/06/18 09:05	08/06/18 15:40	1
Selenium	ND		5.0		mg/Kg		08/06/18 09:05	08/06/18 15:40	1
Silver	ND		1.3		mg/Kg		08/06/18 09:05	08/06/18 15:40	1
Zinc	ND		5.0		mg/Kg		08/06/18 09:05	08/06/18 15:40	1

Lab Sample ID: LCS 590-18113/1-A
 Matrix: Solid
 Analysis Batch: 18136

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18113

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Arsenic	50.0	46.9		mg/Kg		94	80 - 120
Barium	50.0	50.9		mg/Kg		102	80 - 120
Cadmium	50.0	49.4		mg/Kg		99	80 - 120
Chromium	50.0	48.1		mg/Kg		96	80 - 120
Selenium	50.0	45.8		mg/Kg		92	80 - 120
Silver	50.0	49.6		mg/Kg		99	80 - 120
Zinc	50.0	49.6		mg/Kg		99	80 - 120

Lab Sample ID: 590-9069-1 MS
 Matrix: Solid
 Analysis Batch: 18136

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18113

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Arsenic	ND		49.5	50.6		mg/Kg		89	75 - 125
Barium	56	F1	49.5	119	F1	mg/Kg		127	75 - 125
Cadmium	ND		49.5	47.6		mg/Kg		96	75 - 125
Chromium	12		49.5	59.0		mg/Kg		96	75 - 125
Selenium	ND		49.5	ND		mg/Kg		79	75 - 125
Silver	ND		49.5	48.1		mg/Kg		92	75 - 125
Zinc	67	F1	49.5	126		mg/Kg		119	75 - 125

Lab Sample ID: 590-9069-1 MSD
 Matrix: Solid
 Analysis Batch: 18136

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18113

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	Limits	RPD	
				Result	Qualifier					RPD	Limit
Arsenic	ND		48.1	49.9		mg/Kg		90	75 - 125	2	20
Barium	56	F1	48.1	116		mg/Kg		124	75 - 125	3	20
Cadmium	ND		48.1	46.3		mg/Kg		96	75 - 125	3	20
Chromium	12		48.1	59.1		mg/Kg		99	75 - 125	0	20
Selenium	ND		48.1	ND		mg/Kg		80	75 - 125	2	20
Silver	ND		48.1	46.7		mg/Kg		92	75 - 125	3	20
Zinc	67	F1	48.1	134	F1	mg/Kg		140	75 - 125	6	20

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

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

Lab Sample ID: 590-9069-1 DU
 Matrix: Solid
 Analysis Batch: 18136

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18113

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Arsenic	ND		ND		mg/Kg		NC	20
Barium	56	F1	74.8	F3	mg/Kg		29	20
Cadmium	ND		ND		mg/Kg		NC	20
Chromium	12		11.0		mg/Kg		6	20
Selenium	ND		ND		mg/Kg		NC	20
Silver	ND		ND		mg/Kg		NC	20
Zinc	67	F1	94.1	F5	mg/Kg		34	20

Lab Sample ID: MB 590-18194/2-A
 Matrix: Solid
 Analysis Batch: 18230

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18194

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lead	ND		3.0		mg/Kg		08/08/18 14:27	08/09/18 12:19	1

Lab Sample ID: LCS 590-18194/1-A
 Matrix: Solid
 Analysis Batch: 18230

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18194

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Lead	50.0	52.4		mg/Kg		105	80 - 120

Lab Sample ID: 590-9069-1 MS
 Matrix: Solid
 Analysis Batch: 18230

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18194

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Lead	20		49.0	71.4		mg/Kg	☼	105	75 - 125

Lab Sample ID: 590-9069-1 MSD
 Matrix: Solid
 Analysis Batch: 18230

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18194

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Lead	20		49.5	67.6		mg/Kg	☼	96	75 - 125	5	20

Lab Sample ID: 590-9069-1 DU
 Matrix: Solid
 Analysis Batch: 18230

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18194

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Lead	20		22.1		mg/Kg	☼	9	20

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-18117/9-A
 Matrix: Solid
 Analysis Batch: 18133

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18117

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hg	ND		50		ug/Kg		08/06/18 09:39	08/06/18 13:40	1

Lab Sample ID: LCS 590-18117/8-A
 Matrix: Solid
 Analysis Batch: 18133

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18117

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Hg	200	200		ug/Kg		100	80 - 120

Lab Sample ID: 590-9069-1 MS
 Matrix: Solid
 Analysis Batch: 18133

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18117

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Hg	ND		152	160		ug/Kg		102	80 - 120

Lab Sample ID: 590-9069-1 MSD
 Matrix: Solid
 Analysis Batch: 18133

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18117

Analyte	Sample Sample		Spike Added	MSD MSD		Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Hg	ND		189	19	4	ug/Kg		100	80 - 120	19	20

Lab Sample ID: 590-9069-1 DU
 Matrix: Solid
 Analysis Batch: 18133

Client Sample ID: Bay 7 (3-3.5)
 Prep Type: Total/NA
 Prep Batch: 18117

Analyte	Sample Sample		DU DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Hg	ND		ND		ug/Kg		NC	20

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Client Sample ID: Bay 7 (3-3.5)

Lab Sample ID: 590-9069-1

Date Collected: 07/09/18 15:40

Matrix: Solid

Date Received: 08/03/18 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.29 g	50 mL	18113	08/06/18 09:05	JSP	TAL SPK
Total/NA	Analysis	6010C		10			18136	08/06/18 15:43	JSP	TAL SPK
Total/NA	Prep	7471B			0.61 g	50 mL	18117	08/06/18 09:39	JSP	TAL SPK
Total/NA	Analysis	7471B		1			18133	08/06/18 13:59	JSP	TAL SPK
Total/NA	Analysis	Moisture		1			18114	08/06/18 09:11	MO	TAL SPK

Client Sample ID: Bay 7 (3-3.5)

Lab Sample ID: 590-9069-1

Date Collected: 07/09/18 15:40

Matrix: Solid

Date Received: 08/03/18 16:15

Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.28 g	50 mL	18194	08/08/18 14:27	JSP	TAL SPK
Total/NA	Analysis	6010C		2			18230	08/09/18 12:23	JSP	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

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

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9069-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL SPK
7471B	Mercury (CVAA)	SW846	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3050B	Preparation, Metals	SW846	TAL SPK
7471B	Preparation, Mercury	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

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590-9069 Chain of Custody

11922 E. First Ave., Spokane WA 99206-5302
 SW Nimbus Ave., Beaverton, OR 97008-7145
 Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

8/10/2018

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <i>GeoEngineers, Inc</i>		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses STD <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses STD <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify:			
REPORT TO: <i>Josh Lee jlee@geoengineers.com</i>		ADDRESS: <i>503 E. Second Ave Spokane, WA 99202</i>					
PHONE: <i>509-363-3125</i> FAX:		P.O. NUMBER:		* Turnaround Requests less than standard may incur Rush Charges			
PROJECT NAME: <i>Avish - Service Center</i>		PRESERVATIVE:					
PROJECT NUMBER: <i>2522-079-01</i>		REQUESTED ANALYSES:		MATRIX (W. S. O)	# OF CONT.	LOCATION/ COMMENTS	TA (W. O. D)
SAMPLED BY: <i>JML</i>							
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Zinc	PCRA Metals				
<i>Bay 7 (3-3.5)</i>	<i>7/9/2018 1540</i>	<i>X</i>	<i>X</i>			<i>S</i>	<i>2 24hrs TAT</i>
2							
3							
4							
5							
6							
7							
8							
9							
10							
RELEASED BY	DATE	RECEIVED BY: <i>Moffitt</i>	DATE: <i>8-3-18</i>				
PRINT NAME	FIRM	PRINT NAME: <i>Wally Suda</i>	FIRM: <i>TestAmerica</i>	TIME: <i>1615</i>			
RELEASED BY	DATE	RECEIVED BY: <i>Josh Lee</i>	DATE: <i>8-3-18</i>				
PRINT NAME	FIRM	PRINT NAME: <i>Josh Lee</i>	FIRM: <i>GET</i>	TIME: <i>1615</i>			
ADDITIONAL REMARKS:			TEMP: <i>77C</i>	PAGE <i>1</i> OF <i>1</i>			

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9069-2

Login Number: 9069

List Number: 1

Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Thermal preservation not required.
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.	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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

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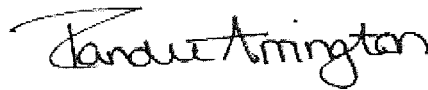
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9188-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
8/30/2018 10:56:38 AM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

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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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Job ID: 590-9188-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 8/20/2018 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

GC/MS Semi VOA

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

GC Semi VOA

Method NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 590-18450 recovered above the upper control limit for Residual Range Organics (RRO) (C25-C36), o-Terphenyl and n-Triacontane-d62. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-2:081718 (590-9188-1), MW-3:081718 (590-9188-2), MW-4:081718 (590-9188-3), MW-5A:081718 (590-9188-4), MW-1:08 (590-9188-5), (CCV 590-18450/28) and (CCV 590-18450/39).

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

Organic Prep

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

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9188-1	MW-2:081718	Water	08/17/18 11:45	08/20/18 16:30
590-9188-2	MW-3:081718	Water	08/17/18 12:40	08/20/18 16:30
590-9188-3	MW-4:081718	Water	08/17/18 13:30	08/20/18 16:30
590-9188-4	MW-5A:081718	Water	08/17/18 10:45	08/20/18 16:30
590-9188-5	MW-1:082018	Water	08/20/18 13:30	08/20/18 16:30

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-2:081718

Lab Sample ID: 590-9188-1

Date Collected: 08/17/18 11:45

Matrix: Water

Date Received: 08/20/18 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.11		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
2-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
1-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Acenaphthylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Acenaphthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Fluorene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Phenanthrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Benzo[a]anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Chrysene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Benzo[b]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Benzo[k]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Benzo[a]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	84		45 - 126	08/24/18 08:46	08/28/18 21:13	1
2-Fluorobiphenyl (Surr)	78		44 - 120	08/24/18 08:46	08/28/18 21:13	1
p-Terphenyl-d14	98		51 - 121	08/24/18 08:46	08/28/18 21:13	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1221	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1232	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1242	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1248	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1254	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1260	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1268	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1
PCB-1262	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		20 - 120	08/22/18 11:56	08/22/18 16:36	1
DCB Decachlorobiphenyl (Surr)	89		36 - 138	08/22/18 11:56	08/22/18 16:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		08/22/18 08:33	08/22/18 18:49	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		08/22/18 08:33	08/22/18 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150	08/22/18 08:33	08/22/18 18:49	1
n-Triacontane-d62	93		50 - 150	08/22/18 08:33	08/22/18 18:49	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-3:081718

Lab Sample ID: 590-9188-2

Date Collected: 08/17/18 12:40

Matrix: Water

Date Received: 08/20/18 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.11		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
2-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
1-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Acenaphthylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Acenaphthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Fluorene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Phenanthrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Benzo[a]anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Chrysene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Benzo[b]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Benzo[k]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Benzo[a]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		45 - 126	08/24/18 08:46	08/28/18 21:40	1
2-Fluorobiphenyl (Surr)	68		44 - 120	08/24/18 08:46	08/28/18 21:40	1
p-Terphenyl-d14	91		51 - 121	08/24/18 08:46	08/28/18 21:40	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1221	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1232	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1242	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1248	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1254	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1260	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1268	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1
PCB-1262	ND		0.10		ug/L		08/22/18 11:56	08/22/18 16:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		20 - 120	08/22/18 11:56	08/22/18 16:57	1
DCB Decachlorobiphenyl (Surr)	86		36 - 138	08/22/18 11:56	08/22/18 16:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		08/22/18 08:33	08/22/18 19:27	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		08/22/18 08:33	08/22/18 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	08/22/18 08:33	08/22/18 19:27	1
n-Triacontane-d62	90		50 - 150	08/22/18 08:33	08/22/18 19:27	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-4:081718

Lab Sample ID: 590-9188-3

Date Collected: 08/17/18 13:30

Matrix: Water

Date Received: 08/20/18 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.17		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
2-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
1-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Acenaphthylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Acenaphthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Fluorene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Phenanthrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Benzo[a]anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Chrysene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Benzo[b]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Benzo[k]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Benzo[a]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Dibenz[a,h]anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	83		45 - 126				08/24/18 08:46	08/28/18 22:07	1
2-Fluorobiphenyl (Surr)	77		44 - 120				08/24/18 08:46	08/28/18 22:07	1
p-Terphenyl-d14	98		51 - 121				08/24/18 08:46	08/28/18 22:07	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1221	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1232	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1242	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1248	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1254	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1260	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1268	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
PCB-1262	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		20 - 120				08/22/18 11:56	08/22/18 17:18	1
DCB Decachlorobiphenyl (Surr)	88		36 - 138				08/22/18 11:56	08/22/18 17:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		08/22/18 08:33	08/22/18 19:46	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		08/22/18 08:33	08/22/18 19:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150				08/22/18 08:33	08/22/18 19:46	1
n-Triacontane-d62	83		50 - 150				08/22/18 08:33	08/22/18 19:46	1

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-5A:081718

Lab Sample ID: 590-9188-4

Date Collected: 08/17/18 10:45

Matrix: Water

Date Received: 08/20/18 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
2-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
1-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Acenaphthylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Acenaphthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Fluorene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Phenanthrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Benzo[a]anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Chrysene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Benzo[b]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Benzo[k]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Benzo[a]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	78		45 - 126	08/24/18 08:46	08/28/18 22:33	1
2-Fluorobiphenyl (Surr)	72		44 - 120	08/24/18 08:46	08/28/18 22:33	1
p-Terphenyl-d14	90		51 - 121	08/24/18 08:46	08/28/18 22:33	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1221	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1232	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1242	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1248	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1254	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1260	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1268	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1
PCB-1262	ND		0.10		ug/L		08/22/18 11:56	08/22/18 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	61		20 - 120	08/22/18 11:56	08/22/18 17:38	1
DCB Decachlorobiphenyl (Surr)	89		36 - 138	08/22/18 11:56	08/22/18 17:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		08/22/18 08:33	08/22/18 20:04	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		08/22/18 08:33	08/22/18 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	08/22/18 08:33	08/22/18 20:04	1
n-Triacontane-d62	105		50 - 150	08/22/18 08:33	08/22/18 20:04	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-1:082018

Lab Sample ID: 590-9188-5

Date Collected: 08/20/18 13:30

Matrix: Water

Date Received: 08/20/18 16:30

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1221	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1232	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1242	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1248	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1254	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1260	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1268	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1
PCB-1262	ND		0.32		ug/L		08/22/18 11:56	08/22/18 17:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		20 - 120	08/22/18 11:56	08/22/18 17:59	1
DCB Decachlorobiphenyl (Surr)	90		36 - 138	08/22/18 11:56	08/22/18 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.39		mg/L		08/22/18 08:33	08/22/18 20:23	1
Residual Range Organics (RRO) (C25-C36)	ND		0.66		mg/L		08/22/18 08:33	08/22/18 20:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150	08/22/18 08:33	08/22/18 20:23	1
n-Triacontane-d62	104		50 - 150	08/22/18 08:33	08/22/18 20:23	1

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

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

Lab Sample ID: MB 590-18490/1-A
 Matrix: Water
 Analysis Batch: 18548

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18490

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
2-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
1-Methylnaphthalene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Acenaphthylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Acenaphthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Fluorene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Phenanthrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Benzo[a]anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Chrysene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Benzo[b]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Benzo[k]fluoranthene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Benzo[a]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		08/24/18 08:46	08/28/18 19:54	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	87		45 - 126	08/24/18 08:46	08/28/18 19:54	1
2-Fluorobiphenyl (Surr)	80		44 - 120	08/24/18 08:46	08/28/18 19:54	1
p-Terphenyl-d14	98		51 - 121	08/24/18 08:46	08/28/18 19:54	1

Lab Sample ID: LCS 590-18490/2-A
 Matrix: Water
 Analysis Batch: 18548

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	1.60	1.08		ug/L		67	52 - 121
2-Methylnaphthalene	1.60	1.03		ug/L		65	44 - 134
1-Methylnaphthalene	1.60	1.18		ug/L		74	56 - 123
Acenaphthylene	1.60	1.13		ug/L		71	57 - 134
Acenaphthene	1.60	1.17		ug/L		73	54 - 132
Fluorene	1.60	1.22		ug/L		76	59 - 141
Phenanthrene	1.60	1.35		ug/L		85	57 - 141
Anthracene	1.60	1.47		ug/L		92	60 - 136
Fluoranthene	1.60	1.44		ug/L		90	76 - 133
Pyrene	1.60	1.43		ug/L		90	59 - 145
Benzo[a]anthracene	1.60	1.50		ug/L		94	76 - 138
Chrysene	1.60	1.49		ug/L		93	69 - 138
Benzo[b]fluoranthene	1.60	1.54		ug/L		96	69 - 144
Benzo[k]fluoranthene	1.60	1.45		ug/L		90	67 - 141
Benzo[a]pyrene	1.60	1.45		ug/L		90	70 - 141
Indeno[1,2,3-cd]pyrene	1.60	1.48		ug/L		93	73 - 146
Dibenz(a,h)anthracene	1.60	1.48		ug/L		93	68 - 144
Benzo[g,h,i]perylene	1.60	1.46		ug/L		91	68 - 150

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

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

Lab Sample ID: LCS 590-18490/2-A
 Matrix: Water
 Analysis Batch: 18548

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18490

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	88		45 - 126
2-Fluorobiphenyl (Surr)	70		44 - 120
p-Terphenyl-d14	102		51 - 121

Lab Sample ID: LCSD 590-18490/3-A
 Matrix: Water
 Analysis Batch: 18548

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18490

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Naphthalene	1.60	1.21		ug/L		76	52 - 121	12	30	
2-Methylnaphthalene	1.60	1.18		ug/L		74	44 - 134	13	30	
1-Methylnaphthalene	1.60	1.34		ug/L		83	56 - 123	13	30	
Acenaphthylene	1.60	1.26		ug/L		79	57 - 134	11	30	
Acenaphthene	1.60	1.31		ug/L		82	54 - 132	12	30	
Fluorene	1.60	1.36		ug/L		85	59 - 141	11	30	
Phenanthrene	1.60	1.47		ug/L		92	57 - 141	8	30	
Anthracene	1.60	1.58		ug/L		99	60 - 136	8	30	
Fluoranthene	1.60	1.52		ug/L		95	76 - 133	5	30	
Pyrene	1.60	1.51		ug/L		94	59 - 145	5	30	
Benzo[a]anthracene	1.60	1.55		ug/L		97	76 - 138	4	30	
Chrysene	1.60	1.53		ug/L		96	69 - 138	3	30	
Benzo[b]fluoranthene	1.60	1.62		ug/L		101	69 - 144	5	30	
Benzo[k]fluoranthene	1.60	1.52		ug/L		95	67 - 141	5	30	
Benzo[a]pyrene	1.60	1.51		ug/L		94	70 - 141	4	30	
Indeno[1,2,3-cd]pyrene	1.60	1.54		ug/L		96	73 - 146	4	30	
Dibenz(a,h)anthracene	1.60	1.55		ug/L		97	68 - 144	4	30	
Benzo[g,h,i]perylene	1.60	1.53		ug/L		96	68 - 150	5	30	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	95		45 - 126
2-Fluorobiphenyl (Surr)	85		44 - 120
p-Terphenyl-d14	105		51 - 121

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-18452/1-A
 Matrix: Water
 Analysis Batch: 18453

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18452

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1221	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1232	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1242	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1248	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1254	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1260	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-18452/1-A
Matrix: Water
Analysis Batch: 18453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18452

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1268	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1
PCB-1262	ND		0.10		ug/L		08/22/18 11:56	08/22/18 15:14	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	78		20 - 120	08/22/18 11:56	08/22/18 15:14	1
DCB Decachlorobiphenyl (Surr)	94		36 - 138	08/22/18 11:56	08/22/18 15:14	1

Lab Sample ID: LCS 590-18452/2-A
Matrix: Water
Analysis Batch: 18453

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
PCB-1260	1.60	1.44		ug/L		90	22 - 139	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	58		20 - 120
DCB Decachlorobiphenyl (Surr)	91		36 - 138

Lab Sample ID: LCSD 590-18452/3-A
Matrix: Water
Analysis Batch: 18453

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	Limit
PCB-1260	1.60	1.37		ug/L		86	22 - 139	5	35	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	69		20 - 120
DCB Decachlorobiphenyl (Surr)	88		36 - 138

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

Lab Sample ID: MB 590-18442/1-A
Matrix: Water
Analysis Batch: 18450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18442

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		08/22/18 08:33	08/22/18 14:22	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		08/22/18 08:33	08/22/18 14:22	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
o-Terphenyl	91		50 - 150	08/22/18 08:33	08/22/18 14:22	1
n-Triacontane-d62	94		50 - 150	08/22/18 08:33	08/22/18 14:22	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

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

Lab Sample ID: LCS 590-18442/2-A
 Matrix: Water
 Analysis Batch: 18450

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18442
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.30		mg/L		81	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.83		mg/L		114	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	97		50 - 150
<i>n</i> -Triacontane-d62	95		50 - 150

Lab Sample ID: LCSD 590-18442/3-A
 Matrix: Water
 Analysis Batch: 18450

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18442
 %Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Diesel Range Organics (DRO) (C10-C25)	1.60	1.36		mg/L		85	50 - 150	5	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.77		mg/L		111	50 - 150	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	93		50 - 150
<i>n</i> -Triacontane-d62	89		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-2:081718

Date Collected: 08/17/18 11:45
 Date Received: 08/20/18 16:30

Lab Sample ID: 590-9188-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250.5 mL	2 mL	18490	08/24/18 08:46	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18548	08/28/18 21:13	NMI	TAL SPK
Total/NA	Prep	3510C			250.5 mL	2 mL	18452	08/22/18 11:56	MO	TAL SPK
Total/NA	Analysis	8082A		1			18453	08/22/18 16:36	NMI	TAL SPK
Total/NA	Prep	3510C			248 mL	2 mL	18442	08/22/18 08:33	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18450	08/22/18 18:49	NMI	TAL SPK

Client Sample ID: MW-3:081718

Date Collected: 08/17/18 12:40
 Date Received: 08/20/18 16:30

Lab Sample ID: 590-9188-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.9 mL	2 mL	18490	08/24/18 08:46	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18548	08/28/18 21:40	NMI	TAL SPK
Total/NA	Prep	3510C			249.5 mL	2 mL	18452	08/22/18 11:56	MO	TAL SPK
Total/NA	Analysis	8082A		1			18453	08/22/18 16:57	NMI	TAL SPK
Total/NA	Prep	3510C			248.4 mL	2 mL	18442	08/22/18 08:33	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18450	08/22/18 19:27	NMI	TAL SPK

Client Sample ID: MW-4:081718

Date Collected: 08/17/18 13:30
 Date Received: 08/20/18 16:30

Lab Sample ID: 590-9188-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250.4 mL	2 mL	18490	08/24/18 08:46	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18548	08/28/18 22:07	NMI	TAL SPK
Total/NA	Prep	3510C			250.4 mL	2 mL	18452	08/22/18 11:56	MO	TAL SPK
Total/NA	Analysis	8082A		1			18453	08/22/18 17:18	NMI	TAL SPK
Total/NA	Prep	3510C			268.2 mL	2 mL	18442	08/22/18 08:33	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18450	08/22/18 19:46	NMI	TAL SPK

Client Sample ID: MW-5A:081718

Date Collected: 08/17/18 10:45
 Date Received: 08/20/18 16:30

Lab Sample ID: 590-9188-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			249.3 mL	2 mL	18490	08/24/18 08:46	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18548	08/28/18 22:33	NMI	TAL SPK
Total/NA	Prep	3510C			250.5 mL	2 mL	18452	08/22/18 11:56	MO	TAL SPK
Total/NA	Analysis	8082A		1			18453	08/22/18 17:38	NMI	TAL SPK
Total/NA	Prep	3510C			248.6 mL	2 mL	18442	08/22/18 08:33	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18450	08/22/18 20:04	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Client Sample ID: MW-1:082018

Lab Sample ID: 590-9188-5

Date Collected: 08/20/18 13:30

Matrix: Water

Date Received: 08/20/18 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			78.7 mL	2 mL	18452	08/22/18 11:56	MO	TAL SPK
Total/NA	Analysis	8082A		1			18453	08/22/18 17:59	NMI	TAL SPK
Total/NA	Prep	3510C			152.2 mL	2 mL	18442	08/22/18 08:33	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18450	08/22/18 20:23	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8082A	3510C	Water	PCB-1262
8082A	3510C	Water	PCB-1268

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9188-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

RELAYED TO ENVIRONMENTAL TESTING

8/30/2018

Client Information	Sampler: Josh Lee	Lab PM Arrington, Randee E	590-9188 Chain of Custody
Client Contact Josh Lee	Phone: (509) 924-1310	E-Mail: randee.arrington@testa.com	
Company GeoEngineers Inc	Due Date Requested: 8/20/18		TAT Requested (days): 5 days
Address 523 East Second Ave	PO # Purchase Order not required		WO #
City Spokane	Project # 59001557		SSOW #
State, Zip WA, 99202	Project Name Avista-Spokane Service Ctr/2522-079-01		Site
Phone 406-239-7810(Tel)	Project # 59001557		SSOW #
Email jmllee@geoengineers.com	Project Name Avista-Spokane Service Ctr/2522-079-01		Site

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested								Total Number of Containers	Special Instructions/Note:	
							82700_SIM - Polycyclic Aromatic Hydrocarbons	8082A - PCBs - Standard List	NWTPH_Dx - DRO and RRO	NWTPH_Dx - DSC and RRO	6010C/7471B - RCRA 8 Metals						
MW-1-08	8/17/18	1115	G	Water	X	X	N	N	A	N	N						
MW-1-21-08	8/17/18	1115	G	Water	X	X											
MW-1-3-08	8/17/18	1210	G	Water	X	X											
MW-1-08	8/17/18	1300	G	Water	X	X											
MW-1-08	8/17/18	1415	G	Water	X	X											
MW-1-08	8/17/18	1500	G	Solid	X	X											
MW-1-08	8/20/18	1330	G	Solid				X	X								
				Solid													
				Solid													
				Solid													

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) _____ Special Instructions/QC Requirements: _____

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>Josh Lee</i>	Date/Time: 8/17/18	Company: GEI	Received by: <i>Arrington, Randee E</i>
Relinquished by: <i>Josh Lee</i>	Date/Time: 8/20/18 1630	Company: GEI	Received by: <i>Shirley Fry</i>
Relinquished by:	Date/Time:	Company:	Received by:

Custody Seals Intact: Yes No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 4.0°C IPO04

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9188-1

Login Number: 9188
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

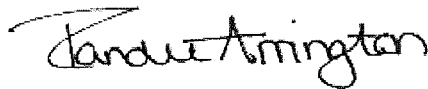
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9296-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
9/7/2018 10:14:43 AM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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www.testamericainc.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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Job ID: 590-9296-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 9/4/2018 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.7° C.

GC/MS Semi VOA

Method 8270D SIM: Due to the high concentration of multiple analytes, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 590-18672 and analytical batch 590-18673 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8270D SIM: The following sample was diluted due to the abundance of non-target analytes: TP-5(9-10) (590-9296-8). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered diesel and/or a light weight oil as well as biogenic interference in the following sample: TP-1(3-4) (590-9296-1).

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered diesel and/or a light weight oil in the following samples: TP-2(3-4) (590-9296-3), TP-2(11-12) (590-9296-4) and TP-5(9-10) (590-9296-8).

Method NWTPH-Dx: Surrogate recovery for the following sample was outside control limits: TP-5(9-10) (590-9296-8). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method NWTPH-Dx: Due to the high concentration of Diesel Range Organics (DRO) (C10-C25) and Residual Range Organics (RRO) (C25-C36) the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 590-18675 and analytical batch 590-18679 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method NWTPH-Dx: Detected hydrocarbons appear to be due to creosote similar product in the following samples: TP-1(11-12) (590-9296-2) and (590-9296-B-2-B DU).

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9296-1	TP-1(3-4)	Solid	08/31/18 09:40	09/04/18 15:20
590-9296-2	TP-1(11-12)	Solid	08/31/18 10:00	09/04/18 15:20
590-9296-3	TP-2(3-4)	Solid	08/31/18 10:20	09/04/18 15:20
590-9296-4	TP-2(11-12)	Solid	08/31/18 10:40	09/04/18 15:20
590-9296-5	TP-3(3-4)	Solid	08/31/18 11:10	09/04/18 15:20
590-9296-6	TP-3(11-12)	Solid	08/31/18 11:30	09/04/18 15:20
590-9296-7	TP-4(12-13)	Solid	08/31/18 12:50	09/04/18 15:20
590-9296-8	TP-5(9-10)	Solid	08/31/18 13:40	09/04/18 15:20

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

GC Semi VOA

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-1(3-4)

Lab Sample ID: 590-9296-1

Date Collected: 08/31/18 09:40

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 92.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	75		11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
2-Methylnaphthalene	33		11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
1-Methylnaphthalene	32		11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Acenaphthylene	ND		11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Acenaphthene	290	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Fluorene	140	F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Phenanthrene	1000	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Anthracene	280	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Fluoranthene	1300	F2	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Pyrene	1100	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Benzo[a]anthracene	560	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Chrysene	650	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Benzo[b]fluoranthene	630	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Benzo[k]fluoranthene	270	F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Benzo[a]pyrene	550	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Indeno[1,2,3-cd]pyrene	320	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Dibenz(a,h)anthracene	100		11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1
Benzo[g,h,i]perylene	330	F2 F1	11		ug/Kg	*	09/05/18 09:32	09/05/18 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	82		23 - 120	09/05/18 09:32	09/05/18 14:11	1
2-Fluorobiphenyl (Surr)	89		38 - 123	09/05/18 09:32	09/05/18 14:11	1
p-Terphenyl-d14	103		68 - 136	09/05/18 09:32	09/05/18 14:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	11		11		mg/Kg	*	09/05/18 10:22	09/05/18 17:00	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	*	09/05/18 10:22	09/05/18 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150	09/05/18 10:22	09/05/18 17:00	1
n-Triacontane-d62	102		50 - 150	09/05/18 10:22	09/05/18 17:00	1

Client Sample ID: TP-1(11-12)

Lab Sample ID: 590-9296-2

Date Collected: 08/31/18 10:00

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 92.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	390		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
2-Methylnaphthalene	210		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
1-Methylnaphthalene	190		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Acenaphthylene	ND		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Acenaphthene	1700		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Fluorene	960		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Phenanthrene	6600		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Anthracene	1800		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Fluoranthene	7000		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Pyrene	6300		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-1(11-12)

Lab Sample ID: 590-9296-2

Date Collected: 08/31/18 10:00

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 92.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	3000		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Chrysene	3700		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Benzo[b]fluoranthene	3200		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Benzo[k]fluoranthene	1300		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Benzo[a]pyrene	2800		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Indeno[1,2,3-cd]pyrene	1500		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Dibenz(a,h)anthracene	520		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10
Benzo[g,h,i]perylene	1400		100		ug/Kg	*	09/05/18 09:32	09/05/18 19:01	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	72		23 - 120	09/05/18 09:32	09/05/18 19:01	10
2-Fluorobiphenyl (Surr)	85		38 - 123	09/05/18 09:32	09/05/18 19:01	10
p-Terphenyl-d14	119		68 - 136	09/05/18 09:32	09/05/18 19:01	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	120		11		mg/Kg	*	09/05/18 10:22	09/05/18 17:59	1
Residual Range Organics (RRO) (C25-C36)	220		27		mg/Kg	*	09/05/18 10:22	09/05/18 17:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	129		50 - 150	09/05/18 10:22	09/05/18 17:59	1
n-Triacontane-d62	106		50 - 150	09/05/18 10:22	09/05/18 17:59	1

Client Sample ID: TP-2(3-4)

Lab Sample ID: 590-9296-3

Date Collected: 08/31/18 10:20

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	280		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
2-Methylnaphthalene	96		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
1-Methylnaphthalene	56		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Acenaphthylene	11		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Acenaphthene	420		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Fluorene	230		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Phenanthrene	1400		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Anthracene	380		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Fluoranthene	1300		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Pyrene	1000		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Benzo[a]anthracene	500		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Chrysene	610		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Benzo[b]fluoranthene	540		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Benzo[k]fluoranthene	210		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Benzo[a]pyrene	460		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Indeno[1,2,3-cd]pyrene	260		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Dibenz(a,h)anthracene	89		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1
Benzo[g,h,i]perylene	270		11		ug/Kg	*	09/05/18 09:32	09/05/18 15:01	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-2(3-4)

Lab Sample ID: 590-9296-3

Date Collected: 08/31/18 10:20

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 90.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		23 - 120	09/05/18 09:32	09/05/18 15:01	1
2-Fluorobiphenyl (Surr)	84		38 - 123	09/05/18 09:32	09/05/18 15:01	1
p-Terphenyl-d14	95		68 - 136	09/05/18 09:32	09/05/18 15:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	140		11		mg/Kg	☼	09/05/18 10:22	09/06/18 09:33	1
Residual Range Organics (RRO) (C25-C36)	490		27		mg/Kg	☼	09/05/18 10:22	09/06/18 09:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	105		50 - 150	09/05/18 10:22	09/06/18 09:33	1
n-Triacontane-d62	101		50 - 150	09/05/18 10:22	09/06/18 09:33	1

Client Sample ID: TP-2(11-12)

Lab Sample ID: 590-9296-4

Date Collected: 08/31/18 10:40

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 93.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	14		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Acenaphthylene	ND		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Acenaphthene	32		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Fluorene	21		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Phenanthrene	140		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Anthracene	39		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Fluoranthene	140		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Pyrene	120		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Benzo[a]anthracene	61		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Chrysene	72		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Benzo[b]fluoranthene	63		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Benzo[k]fluoranthene	29		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Benzo[a]pyrene	54		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Indeno[1,2,3-cd]pyrene	32		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Dibenz(a,h)anthracene	12		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1
Benzo[g,h,i]perylene	33		10		ug/Kg	☼	09/05/18 09:32	09/05/18 15:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		23 - 120	09/05/18 09:32	09/05/18 15:26	1
2-Fluorobiphenyl (Surr)	85		38 - 123	09/05/18 09:32	09/05/18 15:26	1
p-Terphenyl-d14	100		68 - 136	09/05/18 09:32	09/05/18 15:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	20		11		mg/Kg	☼	09/05/18 10:22	09/06/18 09:53	1
Residual Range Organics (RRO) (C25-C36)	57		27		mg/Kg	☼	09/05/18 10:22	09/06/18 09:53	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-2(11-12)

Date Collected: 08/31/18 10:40

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-4

Matrix: Solid

Percent Solids: 93.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	108		50 - 150	09/05/18 10:22	09/06/18 09:53	1
<i>n</i> -Triacontane-d62	103		50 - 150	09/05/18 10:22	09/06/18 09:53	1

Client Sample ID: TP-3(3-4)

Date Collected: 08/31/18 11:10

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-5

Matrix: Solid

Percent Solids: 97.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
2-Methylnaphthalene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
1-Methylnaphthalene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Acenaphthylene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Acenaphthene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Fluorene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Phenanthrene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Anthracene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Fluoranthene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Pyrene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Benzo[a]anthracene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Chrysene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Benzo[b]fluoranthene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Benzo[k]fluoranthene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Benzo[a]pyrene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Indeno[1,2,3-cd]pyrene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Dibenz(a,h)anthracene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1
Benzo[g,h,i]perylene	ND		9.9		ug/Kg	*	09/05/18 09:32	09/05/18 15:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		23 - 120	09/05/18 09:32	09/05/18 15:50	1
2-Fluorobiphenyl (Surr)	89		38 - 123	09/05/18 09:32	09/05/18 15:50	1
<i>p</i> -Terphenyl-d14	110		68 - 136	09/05/18 09:32	09/05/18 15:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		9.9		mg/Kg	*	09/05/18 10:22	09/06/18 10:12	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg	*	09/05/18 10:22	09/06/18 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	106		50 - 150	09/05/18 10:22	09/06/18 10:12	1
<i>n</i> -Triacontane-d62	101		50 - 150	09/05/18 10:22	09/06/18 10:12	1

Client Sample ID: TP-3(11-12)

Date Collected: 08/31/18 11:30

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-6

Matrix: Solid

Percent Solids: 95.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-3(11-12)

Lab Sample ID: 590-9296-6

Date Collected: 08/31/18 11:30

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 95.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Acenaphthylene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Acenaphthene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Fluorene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Phenanthrene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Anthracene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Fluoranthene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Pyrene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Chrysene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	70		23 - 120	09/05/18 09:32	09/05/18 16:15	1
2-Fluorobiphenyl (Surr)	77		38 - 123	09/05/18 09:32	09/05/18 16:15	1
p-Terphenyl-d14	102		68 - 136	09/05/18 09:32	09/05/18 16:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	*	09/05/18 10:22	09/06/18 10:32	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/05/18 10:22	09/06/18 10:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	105		50 - 150	09/05/18 10:22	09/06/18 10:32	1
n-Triacontane-d62	101		50 - 150	09/05/18 10:22	09/06/18 10:32	1

Client Sample ID: TP-4(12-13)

Lab Sample ID: 590-9296-7

Date Collected: 08/31/18 12:50

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 94.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Acenaphthylene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Acenaphthene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Fluorene	ND		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Phenanthrene	37		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Anthracene	12		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Fluoranthene	47		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Pyrene	42		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Benzo[a]anthracene	23		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1
Chrysene	25		10		ug/Kg	*	09/05/18 09:32	09/05/18 16:40	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-4(12-13)

Lab Sample ID: 590-9296-7

Date Collected: 08/31/18 12:50

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 94.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	21		10		ug/Kg	☼	09/05/18 09:32	09/05/18 16:40	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/05/18 09:32	09/05/18 16:40	1
Benzo[a]pyrene	19		10		ug/Kg	☼	09/05/18 09:32	09/05/18 16:40	1
Indeno[1,2,3-cd]pyrene	11		10		ug/Kg	☼	09/05/18 09:32	09/05/18 16:40	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/05/18 09:32	09/05/18 16:40	1
Benzo[g,h,i]perylene	11		10		ug/Kg	☼	09/05/18 09:32	09/05/18 16:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	58		23 - 120	09/05/18 09:32	09/05/18 16:40	1
2-Fluorobiphenyl (Surr)	63		38 - 123	09/05/18 09:32	09/05/18 16:40	1
p-Terphenyl-d14	103		68 - 136	09/05/18 09:32	09/05/18 16:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/05/18 10:22	09/06/18 10:52	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/05/18 10:22	09/06/18 10:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	111		50 - 150	09/05/18 10:22	09/06/18 10:52	1
n-Triacontane-d62	104		50 - 150	09/05/18 10:22	09/06/18 10:52	1

Client Sample ID: TP-5(9-10)

Lab Sample ID: 590-9296-8

Date Collected: 08/31/18 13:40

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 88.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
2-Methylnaphthalene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
1-Methylnaphthalene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Acenaphthylene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Acenaphthene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Fluorene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Phenanthrene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Anthracene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Fluoranthene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Pyrene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Benzo[a]anthracene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Chrysene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Benzo[b]fluoranthene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Benzo[k]fluoranthene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Benzo[a]pyrene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Indeno[1,2,3-cd]pyrene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Dibenz(a,h)anthracene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10
Benzo[g,h,i]perylene	ND		110		ug/Kg	☼	09/05/18 09:32	09/05/18 17:05	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		23 - 120	09/05/18 09:32	09/05/18 17:05	10
2-Fluorobiphenyl (Surr)	92		38 - 123	09/05/18 09:32	09/05/18 17:05	10

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-5(9-10)

Lab Sample ID: 590-9296-8

Date Collected: 08/31/18 13:40

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 88.0

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14	102		68 - 136	09/05/18 09:32	09/05/18 17:05	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1221	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1232	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1242	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1248	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1254	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1260	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1268	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1
PCB-1262	ND		11		ug/Kg	*	09/05/18 14:34	09/06/18 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	68		31 - 127	09/05/18 14:34	09/06/18 02:21	1
DCB Decachlorobiphenyl (Surr)	37		20 - 150	09/05/18 14:34	09/06/18 02:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	6300		220		mg/Kg	*	09/05/18 10:22	09/06/18 11:11	20
Residual Range Organics (RRO) (C25-C36)	25000		550		mg/Kg	*	09/05/18 10:22	09/06/18 11:11	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	75		50 - 150	09/05/18 10:22	09/06/18 11:11	20
<i>n</i> -Triacontane-d62	166	X	50 - 150	09/05/18 10:22	09/06/18 11:11	20

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

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

Lab Sample ID: MB 590-18672/1-A
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18672

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
2-Methylnaphthalene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
1-Methylnaphthalene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Acenaphthylene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Acenaphthene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Fluorene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Phenanthrene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Anthracene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Fluoranthene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Pyrene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Benzo[a]anthracene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Chrysene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Benzo[b]fluoranthene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Benzo[k]fluoranthene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Benzo[a]pyrene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Dibenz(a,h)anthracene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1
Benzo[g,h,i]perylene	ND		10		ug/Kg		09/05/18 09:32	09/05/18 12:07	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	101		23 - 120	09/05/18 09:32	09/05/18 12:07	1
2-Fluorobiphenyl (Surr)	110		38 - 123	09/05/18 09:32	09/05/18 12:07	1
p-Terphenyl-d14	133		68 - 136	09/05/18 09:32	09/05/18 12:07	1

Lab Sample ID: LCS 590-18672/2-A
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18672

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	267	204		ug/Kg		77	41 - 121
2-Methylnaphthalene	267	218		ug/Kg		82	39 - 132
1-Methylnaphthalene	267	237		ug/Kg		89	46 - 131
Acenaphthylene	267	206		ug/Kg		77	56 - 123
Acenaphthene	267	221		ug/Kg		83	43 - 140
Fluorene	267	229		ug/Kg		86	54 - 131
Phenanthrene	267	226		ug/Kg		85	55 - 141
Anthracene	267	249		ug/Kg		93	60 - 129
Fluoranthene	267	247		ug/Kg		93	63 - 141
Pyrene	267	215		ug/Kg		80	62 - 139
Benzo[a]anthracene	267	249		ug/Kg		93	61 - 136
Chrysene	267	245		ug/Kg		92	57 - 144
Benzo[b]fluoranthene	267	237		ug/Kg		89	66 - 141
Benzo[k]fluoranthene	267	239		ug/Kg		90	63 - 150
Benzo[a]pyrene	267	237		ug/Kg		89	60 - 133
Indeno[1,2,3-cd]pyrene	267	251		ug/Kg		94	55 - 142
Dibenz(a,h)anthracene	267	259		ug/Kg		97	60 - 150
Benzo[g,h,i]perylene	267	251		ug/Kg		94	58 - 147

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

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

Lab Sample ID: LCS 590-18672/2-A
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18672

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	80		23 - 120
2-Fluorobiphenyl (Surr)	85		38 - 123
p-Terphenyl-d14	100		68 - 136

Lab Sample ID: LCSD 590-18672/3-A
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18672

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD Limit
							Limits	RPD	
Naphthalene	267	195		ug/Kg		73	41 - 121	5	35
2-Methylnaphthalene	267	212		ug/Kg		79	39 - 132	3	35
1-Methylnaphthalene	267	222		ug/Kg		83	46 - 131	6	35
Acenaphthylene	267	186		ug/Kg		70	56 - 123	11	35
Acenaphthene	267	219		ug/Kg		82	43 - 140	1	35
Fluorene	267	216		ug/Kg		81	54 - 131	6	35
Phenanthrene	267	210		ug/Kg		79	55 - 141	8	35
Anthracene	267	226		ug/Kg		85	60 - 129	10	35
Fluoranthene	267	229		ug/Kg		86	63 - 141	8	35
Pyrene	267	230		ug/Kg		86	62 - 139	7	35
Benzo[a]anthracene	267	255		ug/Kg		96	61 - 136	2	35
Chrysene	267	253		ug/Kg		95	57 - 144	3	35
Benzo[b]fluoranthene	267	261		ug/Kg		98	66 - 141	9	35
Benzo[k]fluoranthene	267	250		ug/Kg		94	63 - 150	4	35
Benzo[a]pyrene	267	251		ug/Kg		94	60 - 133	6	35
Indeno[1,2,3-cd]pyrene	267	268		ug/Kg		100	55 - 142	6	35
Dibenz(a,h)anthracene	267	272		ug/Kg		102	60 - 150	5	35
Benzo[g,h,i]perylene	267	269		ug/Kg		101	58 - 147	7	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	78		23 - 120
2-Fluorobiphenyl (Surr)	82		38 - 123
p-Terphenyl-d14	104		68 - 136

Lab Sample ID: 590-9296-1 MS
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: TP-1(3-4)
 Prep Type: Total/NA
 Prep Batch: 18672

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Naphthalene	75		277	275		ug/Kg	*	72	41 - 121	
2-Methylnaphthalene	33		277	243		ug/Kg	*	76	39 - 132	
1-Methylnaphthalene	32		277	260		ug/Kg	*	82	46 - 131	
Acenaphthylene	ND		277	209		ug/Kg	*	73	56 - 123	
Acenaphthene	290	F2 F1	277	520		ug/Kg	*	82	43 - 140	
Fluorene	140	F1	277	377		ug/Kg	*	86	54 - 131	
Phenanthrene	1000	F2 F1	277	1230		ug/Kg	*	83	55 - 141	
Anthracene	280	F2 F1	277	542		ug/Kg	*	94	60 - 129	
Fluoranthene	1300	F2	277	1370	4	ug/Kg	*	40	63 - 141	
Pyrene	1100	F2 F1	277	1230	F1	ug/Kg	*	50	62 - 139	

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

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

Lab Sample ID: 590-9296-1 MS
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: TP-1(3-4)
 Prep Type: Total/NA
 Prep Batch: 18672
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Benzo[a]anthracene	560	F2 F1	277	711	F1	ug/Kg	*	54	61 - 136
Chrysene	650	F2 F1	277	821		ug/Kg	*	60	57 - 144
Benzo[b]fluoranthene	630	F2 F1	277	676	F1	ug/Kg	*	16	66 - 141
Benzo[k]fluoranthene	270	F1	277	494	F1	ug/Kg	*	-46	63 - 150
Benzo[a]pyrene	550	F2 F1	277	671	F1	ug/Kg	*	45	60 - 133
Indeno[1,2,3-cd]pyrene	320	F2 F1	277	507		ug/Kg	*	67	55 - 142
Dibenz(a,h)anthracene	100		277	365		ug/Kg	*	94	60 - 150
Benzo[g,h,i]perylene	330	F2 F1	277	519		ug/Kg	*	70	58 - 147

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5	70		23 - 120
2-Fluorobiphenyl (Surr)	78		38 - 123
p-Terphenyl-d14	109		68 - 136

Lab Sample ID: 590-9296-1 MSD
 Matrix: Solid
 Analysis Batch: 18673

Client Sample ID: TP-1(3-4)
 Prep Type: Total/NA
 Prep Batch: 18672
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	75		279	231		ug/Kg	*	56	41 - 121	17	35
2-Methylnaphthalene	33		279	225		ug/Kg	*	68	39 - 132	8	35
1-Methylnaphthalene	32		279	254		ug/Kg	*	80	46 - 131	2	35
Acenaphthylene	ND		279	206		ug/Kg	*	72	56 - 123	1	35
Acenaphthene	290	F2 F1	279	311	F2 F1	ug/Kg	*	7	43 - 140	50	35
Fluorene	140	F1	279	273	F1	ug/Kg	*	48	54 - 131	32	35
Phenanthrene	1000	F2 F1	279	525	F2 F1	ug/Kg	*	-170	55 - 141	80	35
Anthracene	280	F2 F1	279	329	F2 F1	ug/Kg	*	17	60 - 129	49	35
Fluoranthene	1300	F2	279	613	4 F2	ug/Kg	*	-230	63 - 141	76	35
Pyrene	1100	F2 F1	279	531	F2 F1	ug/Kg	*	-201	62 - 139	79	35
Benzo[a]anthracene	560	F2 F1	279	404	F2 F1	ug/Kg	*	-56	61 - 136	55	35
Chrysene	650	F2 F1	279	441	F2 F1	ug/Kg	*	-76	57 - 144	60	35
Benzo[b]fluoranthene	630	F2 F1	279	410	F2 F1	ug/Kg	*	-80	66 - 141	49	35
Benzo[k]fluoranthene	270	F1	279	349	F1	ug/Kg	*	-97	63 - 150	35	35
Benzo[a]pyrene	550	F2 F1	279	405	F2 F1	ug/Kg	*	-51	60 - 133	49	35
Indeno[1,2,3-cd]pyrene	320	F2 F1	279	345	F2 F1	ug/Kg	*	8	55 - 142	38	35
Dibenz(a,h)anthracene	100		279	305		ug/Kg	*	72	60 - 150	18	35
Benzo[g,h,i]perylene	330	F2 F1	279	359	F2 F1	ug/Kg	*	12	58 - 147	36	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5	72		23 - 120
2-Fluorobiphenyl (Surr)	77		38 - 123
p-Terphenyl-d14	98		68 - 136

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-18680/1-A
 Matrix: Solid
 Analysis Batch: 18670

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18680

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1221	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1232	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1242	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1248	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1254	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1260	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1268	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1
PCB-1262	ND		10		ug/Kg		09/05/18 14:34	09/05/18 18:27	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	89		31 - 127	09/05/18 14:34	09/05/18 18:27	1
DCB Decachlorobiphenyl (Surr)	94		20 - 150	09/05/18 14:34	09/05/18 18:27	1

Lab Sample ID: LCS 590-18680/2-A
 Matrix: Solid
 Analysis Batch: 18670

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1260	66.7	59.9		ug/Kg		90	52 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	89		31 - 127
DCB Decachlorobiphenyl (Surr)	92		20 - 150

Lab Sample ID: LCSD 590-18680/3-A
 Matrix: Solid
 Analysis Batch: 18670

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18680

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1260	66.7	59.7		ug/Kg		90	52 - 150	0	25

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	91		31 - 127
DCB Decachlorobiphenyl (Surr)	91		20 - 150

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

Lab Sample ID: MB 590-18675/1-A
 Matrix: Solid
 Analysis Batch: 18679

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18675

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		09/05/18 10:22	09/05/18 16:01	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

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

Lab Sample ID: MB 590-18675/1-A
 Matrix: Solid
 Analysis Batch: 18679

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18675

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		09/05/18 10:22	09/05/18 16:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	103		50 - 150	09/05/18 10:22	09/05/18 16:01	1
<i>n</i> -Triacontane-d62	91		50 - 150	09/05/18 10:22	09/05/18 16:01	1

Lab Sample ID: LCS 590-18675/2-A
 Matrix: Solid
 Analysis Batch: 18679

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	66.7	56.3		mg/Kg		84	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	61.6		mg/Kg		92	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	106		50 - 150
<i>n</i> -Triacontane-d62	96		50 - 150

Lab Sample ID: LCSD 590-18675/3-A
 Matrix: Solid
 Analysis Batch: 18679

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18675

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics (DRO) (C10-C25)	66.7	58.1		mg/Kg		87	50 - 150	3	25
Residual Range Organics (RRO) (C25-C36)	66.7	65.4		mg/Kg		98	50 - 150	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	109		50 - 150
<i>n</i> -Triacontane-d62	102		50 - 150

Lab Sample ID: 590-9296-3 MS
 Matrix: Solid
 Analysis Batch: 18679

Client Sample ID: TP-2(3-4)
 Prep Type: Total/NA
 Prep Batch: 18675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	140		71.8	180	F1	mg/Kg	☼	59	70.1 - 139
Residual Range Organics (RRO) (C25-C36)	490		71.8	474	4	mg/Kg	☼	-21	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>o</i> -Terphenyl	103		50 - 150
<i>n</i> -Triacontane-d62	97		50 - 150

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

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

Lab Sample ID: 590-9296-3 MSD

Matrix: Solid

Analysis Batch: 18679

Client Sample ID: TP-2(3-4)

Prep Type: Total/NA

Prep Batch: 18675

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						Limit	Limit
Diesel Range Organics (DRO) (C10-C25)	140		72.6	226		mg/Kg	✱	121	70.1 - 139		23	25
Residual Range Organics (RRO) (C25-C36)	490		72.6	620	4 F2	mg/Kg	✱	180	50 - 150		27	25

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	107		50 - 150
<i>n</i> -Triacontane-d62	106		50 - 150

Lab Sample ID: 590-9296-2 DU

Matrix: Solid

Analysis Batch: 18679

Client Sample ID: TP-1(11-12)

Prep Type: Total/NA

Prep Batch: 18675

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier				Limit	Limit
Diesel Range Organics (DRO) (C10-C25)	120		220	F3	mg/Kg	✱		57	40
Residual Range Organics (RRO) (C25-C36)	220		364	F3	mg/Kg	✱		49	40

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	148		50 - 150
<i>n</i> -Triacontane-d62	147		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-1(3-4)

Date Collected: 08/31/18 09:40

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-1(3-4)

Date Collected: 08/31/18 09:40

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-1

Matrix: Solid

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.36 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18673	09/05/18 14:11	NMI	TAL SPK
Total/NA	Prep	3550C			15.12 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18679	09/05/18 17:00	NMI	TAL SPK

Client Sample ID: TP-1(11-12)

Date Collected: 08/31/18 10:00

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-1(11-12)

Date Collected: 08/31/18 10:00

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-2

Matrix: Solid

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.60 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK
Total/NA	Analysis	8270D SIM		10			18673	09/05/18 19:01	NMI	TAL SPK
Total/NA	Prep	3550C			15.01 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18679	09/05/18 17:59	NMI	TAL SPK

Client Sample ID: TP-2(3-4)

Date Collected: 08/31/18 10:20

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-2(3-4)

Date Collected: 08/31/18 10:20

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-3

Matrix: Solid

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.25 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-2(3-4)

Date Collected: 08/31/18 10:20
 Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-3

Matrix: Solid
 Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18673	09/05/18 15:01	NMI	TAL SPK
Total/NA	Prep	3550C			15.47 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18689	09/06/18 09:33	NMI	TAL SPK

Client Sample ID: TP-2(11-12)

Date Collected: 08/31/18 10:40
 Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-2(11-12)

Date Collected: 08/31/18 10:40
 Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-4

Matrix: Solid
 Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.51 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18673	09/05/18 15:26	NMI	TAL SPK
Total/NA	Prep	3550C			15.01 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18689	09/06/18 09:53	NMI	TAL SPK

Client Sample ID: TP-3(3-4)

Date Collected: 08/31/18 11:10
 Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-3(3-4)

Date Collected: 08/31/18 11:10
 Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-5

Matrix: Solid
 Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.54 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18673	09/05/18 15:50	NMI	TAL SPK
Total/NA	Prep	3550C			15.54 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18689	09/06/18 10:12	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-3(11-12)

Lab Sample ID: 590-9296-6

Date Collected: 08/31/18 11:30

Matrix: Solid

Date Received: 09/04/18 15:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-3(11-12)

Lab Sample ID: 590-9296-6

Date Collected: 08/31/18 11:30

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.09 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18673	09/05/18 16:15	NMI	TAL SPK
Total/NA	Prep	3550C			15.12 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18689	09/06/18 10:32	NMI	TAL SPK

Client Sample ID: TP-4(12-13)

Lab Sample ID: 590-9296-7

Date Collected: 08/31/18 12:50

Matrix: Solid

Date Received: 09/04/18 15:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18674	09/05/18 09:55	MO	TAL SPK

Client Sample ID: TP-4(12-13)

Lab Sample ID: 590-9296-7

Date Collected: 08/31/18 12:50

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.25 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18673	09/05/18 16:40	NMI	TAL SPK
Total/NA	Prep	3550C			15.43 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18689	09/06/18 10:52	NMI	TAL SPK

Client Sample ID: TP-5(9-10)

Lab Sample ID: 590-9296-8

Date Collected: 08/31/18 13:40

Matrix: Solid

Date Received: 09/04/18 15:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18699	09/06/18 10:46	MO	TAL SPK

Client Sample ID: TP-5(9-10)

Lab Sample ID: 590-9296-8

Date Collected: 08/31/18 13:40

Matrix: Solid

Date Received: 09/04/18 15:20

Percent Solids: 88.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.65 g	2 mL	18672	09/05/18 09:32	MO	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Client Sample ID: TP-5(9-10)

Date Collected: 08/31/18 13:40

Date Received: 09/04/18 15:20

Lab Sample ID: 590-9296-8

Matrix: Solid

Percent Solids: 88.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		10			18673	09/05/18 17:05	NMI	TAL SPK
Total/NA	Prep	3550C			15.23 g	5 mL	18680	09/05/18 14:34	MO	TAL SPK
Total/NA	Analysis	8082A		1			18670	09/06/18 02:21	NMI	TAL SPK
Total/NA	Prep	3550C			15.39 g	5 mL	18675	09/05/18 10:22	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		20			18689	09/06/18 11:11	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8082A	3550C	Solid	PCB-1262
8082A	3550C	Solid	PCB-1268
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9296-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK
3665A	Sulfuric Acid/Permanganate Cleanup	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210



CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <i>(20050000)</i>		INVOICE TO: GET		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> <1 STD Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> <1 STD <input type="checkbox"/> OTHER Specify:							
REPORT TO: <i>jml@geoenergy.com</i>		ADDRESS: <i>523 E. Second Ave Spokane, WA 99202</i>						PROJECT NAME: <i>Arista - Service Center</i>		PROJECT NUMBER: <i>2622-079-01</i>	
PHONE: _____ FAX: _____		P.O. NUMBER: _____		PRESERVATIVE							
PROJECT NAME: <i>Arista - Service Center</i>		PROJECT NUMBER: <i>2622-079-01</i>		REQUESTED ANALYSES							
SAMPLED BY: <i>JML</i>											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTFH-DX	PAHs 8270 SD1	PCBs				MATRIX (W, S, O)	# OF CONT	LOCATION/ COMMENTS	TA WO ID
<i>TP-1(3-4)</i>	<i>8/31/2018 0940</i>	<i>X</i>	<i>X</i>					<i>S</i>	<i>2</i>	<i>2 day TAT</i>	
<i>TP-1(11-12)</i>	<i>1000</i>	<i>X</i>	<i>X</i>					<i> </i>	<i> </i>	<i> </i>	
<i>TP-2(3-4)</i>	<i>1020</i>	<i>X</i>	<i>X</i>					<i> </i>	<i> </i>	<i> </i>	
<i>TP-2(11-12)</i>	<i>1040</i>	<i>X</i>	<i>X</i>					<i> </i>	<i> </i>	<i> </i>	
<i>TP-3(3-4)</i>	<i>1110</i>	<i>X</i>	<i>X</i>					<i> </i>	<i> </i>	<i> </i>	
<i>TP-3(11-12)</i>	<i>1130</i>	<i>X</i>	<i>X</i>					<i> </i>	<i> </i>	<i> </i>	
<i>TP-4(12-13)</i>	<i>1150</i>	<i>X</i>	<i>X</i>					<i> </i>	<i> </i>	<i> </i>	
<i>TP-5(9-10)</i>	<i>1340</i>	<i>X</i>	<i>X</i>	<i>X</i>				<i> </i>	<i> </i>	<i> </i>	
RELEASED BY: <i>[Signature]</i>		FIRM: <i>GET</i>		DATE: <i>9/21/2018</i>		TIME: <i>1520</i>		RECEIVED BY: <i>[Signature]</i>		DATE: <i>9/21/18</i>	
PRINT NAME: <i>Josh Lee</i>		FIRM: <i>GET</i>		DATE: <i>9/21/2018</i>		TIME: <i>1520</i>		PRINT NAME: <i>Jeremy P...</i>		DATE: <i>9/21/18</i>	
RELEASED BY:		FIRM:		DATE:		TIME:		RECEIVED BY:		DATE:	
PRINT NAME:		FIRM:		DATE:		TIME:		PRINT NAME:		DATE:	
ADDITIONAL REMARKS										TEMP:	



590-9296 Chain of Custody

LA-100010714

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9296-1

Login Number: 9296

List Source: TestAmerica Spokane

List Number: 1

Creator: Arrington, Randee E

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

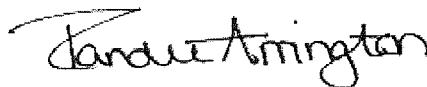
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9328-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
9/10/2018 2:36:20 PM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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The
Expert**

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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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Job ID: 590-9328-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 9/6/2018 2:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9° C.

GC/MS Semi VOA

Method 8270D SIM: Surrogate recovery for the following sample was outside control limits: EX-6-N (3-4) (590-9328-6). 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 Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to a light weight oil in the following samples: EX-1-E (8-9) (590-9328-1), EX-3-E (8-9) (590-9328-3), EX-4-E (8-9) (590-9328-4), EX-5-E (8-9) (590-9328-5) and EX-6-N (3-4) (590-9328-6).

Method NWTPH-Dx: Detected hydrocarbons appear to be due to a light weight oil as well as creosote or similar product in the following sample: EX-2-E (8-9) (590-9328-2).

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9328-1	EX-1-E (8-9)	Solid	09/06/18 12:05	09/06/18 14:50
590-9328-2	EX-2-E (8-9)	Solid	09/06/18 12:10	09/06/18 14:50
590-9328-3	EX-3-E (8-9)	Solid	09/06/18 12:15	09/06/18 14:50
590-9328-4	EX-4-E (8-9)	Solid	09/06/18 12:20	09/06/18 14:50
590-9328-5	EX-5-E (8-9)	Solid	09/06/18 12:25	09/06/18 14:50
590-9328-6	EX-6-N (3-4)	Solid	09/06/18 12:40	09/06/18 14:50

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-1-E (8-9)

Lab Sample ID: 590-9328-1

Date Collected: 09/06/18 12:05

Matrix: Solid

Date Received: 09/06/18 14:50

Percent Solids: 96.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	45		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
2-Methylnaphthalene	22		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
1-Methylnaphthalene	18		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Acenaphthylene	ND		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Acenaphthene	150		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Fluorene	120		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Phenanthrene	860		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Anthracene	250		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Fluoranthene	920		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Pyrene	870		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Benzo[a]anthracene	400		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Chrysene	440		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Benzo[b]fluoranthene	400		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Benzo[k]fluoranthene	140		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Benzo[a]pyrene	330		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Indeno[1,2,3-cd]pyrene	170		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Dibenz(a,h)anthracene	55		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1
Benzo[g,h,i]perylene	160		10		ug/Kg	*	09/07/18 09:11	09/07/18 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		23 - 120	09/07/18 09:11	09/07/18 18:03	1
2-Fluorobiphenyl (Surr)	80		38 - 123	09/07/18 09:11	09/07/18 18:03	1
p-Terphenyl-d14	86		68 - 136	09/07/18 09:11	09/07/18 18:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	850		9.9		mg/Kg	*	09/07/18 11:05	09/08/18 15:36	1
Residual Range Organics (RRO) (C25-C36)	2000		25		mg/Kg	*	09/07/18 11:05	09/08/18 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150	09/07/18 11:05	09/08/18 15:36	1
n-Triacontane-d62	82		50 - 150	09/07/18 11:05	09/08/18 15:36	1

Client Sample ID: EX-2-E (8-9)

Lab Sample ID: 590-9328-2

Date Collected: 09/06/18 12:10

Matrix: Solid

Date Received: 09/06/18 14:50

Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Acenaphthylene	26		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Acenaphthene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Fluorene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Phenanthrene	44		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Anthracene	22		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Fluoranthene	120		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1
Pyrene	130		11		ug/Kg	*	09/07/18 09:11	09/07/18 18:28	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-2-E (8-9)

Lab Sample ID: 590-9328-2

Date Collected: 09/06/18 12:10

Matrix: Solid

Date Received: 09/06/18 14:50

Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	92		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Chrysene	100		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Benzo[b]fluoranthene	100		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Benzo[k]fluoranthene	43		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Benzo[a]pyrene	87		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Indeno[1,2,3-cd]pyrene	41		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Dibenz(a,h)anthracene	15		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1
Benzo[g,h,i]perylene	41		11		ug/Kg	☼	09/07/18 09:11	09/07/18 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	63		23 - 120	09/07/18 09:11	09/07/18 18:28	1
2-Fluorobiphenyl (Surr)	68		38 - 123	09/07/18 09:11	09/07/18 18:28	1
p-Terphenyl-d14	78		68 - 136	09/07/18 09:11	09/07/18 18:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	88		11		mg/Kg	☼	09/07/18 11:05	09/08/18 15:55	1
Residual Range Organics (RRO) (C25-C36)	190		27		mg/Kg	☼	09/07/18 11:05	09/08/18 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	09/07/18 11:05	09/08/18 15:55	1
n-Triacontane-d62	102		50 - 150	09/07/18 11:05	09/08/18 15:55	1

Client Sample ID: EX-3-E (8-9)

Lab Sample ID: 590-9328-3

Date Collected: 09/06/18 12:15

Matrix: Solid

Date Received: 09/06/18 14:50

Percent Solids: 93.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Acenaphthylene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Acenaphthene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Fluorene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Phenanthrene	20		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Anthracene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Fluoranthene	22		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Pyrene	19		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Benzo[a]anthracene	10		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Chrysene	12		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Benzo[b]fluoranthene	11		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/07/18 09:11	09/07/18 18:53	1

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-3-E (8-9)

Date Collected: 09/06/18 12:15
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-3

Matrix: Solid
 Percent Solids: 93.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		23 - 120	09/07/18 09:11	09/07/18 18:53	1
2-Fluorobiphenyl (Surr)	73		38 - 123	09/07/18 09:11	09/07/18 18:53	1
p-Terphenyl-d14	78		68 - 136	09/07/18 09:11	09/07/18 18:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	12		11		mg/Kg	☼	09/07/18 11:05	09/08/18 16:15	1
Residual Range Organics (RRO) (C25-C36)	38		26		mg/Kg	☼	09/07/18 11:05	09/08/18 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150	09/07/18 11:05	09/08/18 16:15	1
n-Triacontane-d62	94		50 - 150	09/07/18 11:05	09/08/18 16:15	1

Client Sample ID: EX-4-E (8-9)

Date Collected: 09/06/18 12:20
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-4

Matrix: Solid
 Percent Solids: 95.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
2-Methylnaphthalene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
1-Methylnaphthalene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Acenaphthylene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Acenaphthene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Fluorene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Phenanthrene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Anthracene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Fluoranthene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Pyrene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Benzo[a]anthracene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Chrysene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Benzo[b]fluoranthene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Benzo[k]fluoranthene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Benzo[a]pyrene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	☼	09/07/18 09:11	09/07/18 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		23 - 120	09/07/18 09:11	09/07/18 19:18	1
2-Fluorobiphenyl (Surr)	77		38 - 123	09/07/18 09:11	09/07/18 19:18	1
p-Terphenyl-d14	81		68 - 136	09/07/18 09:11	09/07/18 19:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/07/18 11:05	09/08/18 16:34	1
Residual Range Organics (RRO) (C25-C36)	33		26		mg/Kg	☼	09/07/18 11:05	09/08/18 16:34	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-4-E (8-9)

Date Collected: 09/06/18 12:20

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-4

Matrix: Solid

Percent Solids: 95.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	93		50 - 150	09/07/18 11:05	09/08/18 16:34	1
<i>n</i> -Triacontane-d62	87		50 - 150	09/07/18 11:05	09/08/18 16:34	1

Client Sample ID: EX-5-E (8-9)

Date Collected: 09/06/18 12:25

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-5

Matrix: Solid

Percent Solids: 92.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Acenaphthylene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Acenaphthene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Fluorene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Phenanthrene	19		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Anthracene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Fluoranthene	24		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Pyrene	20		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Benzo[a]anthracene	11		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Chrysene	12		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Benzo[b]fluoranthene	12		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/07/18 09:11	09/07/18 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		23 - 120	09/07/18 09:11	09/07/18 19:43	1
2-Fluorobiphenyl (Surr)	73		38 - 123	09/07/18 09:11	09/07/18 19:43	1
<i>p</i> -Terphenyl-d14	82		68 - 136	09/07/18 09:11	09/07/18 19:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	42		11		mg/Kg	*	09/07/18 11:05	09/08/18 16:54	1
Residual Range Organics (RRO) (C25-C36)	140		27		mg/Kg	*	09/07/18 11:05	09/08/18 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	91		50 - 150	09/07/18 11:05	09/08/18 16:54	1
<i>n</i> -Triacontane-d62	85		50 - 150	09/07/18 11:05	09/08/18 16:54	1

Client Sample ID: EX-6-N (3-4)

Date Collected: 09/06/18 12:40

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-6

Matrix: Solid

Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/10/18 11:53	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/07/18 09:11	09/10/18 11:53	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-6-N (3-4)

Lab Sample ID: 590-9328-6

Date Collected: 09/06/18 12:40

Matrix: Solid

Date Received: 09/06/18 14:50

Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Acenaphthylene	12		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Acenaphthene	ND		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Fluorene	ND		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Phenanthrene	41		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Anthracene	12		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Fluoranthene	130		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Pyrene	110		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Benzo[a]anthracene	66		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Chrysene	96		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Benzo[b]fluoranthene	110		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Benzo[k]fluoranthene	38		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Benzo[a]pyrene	74		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Indeno[1,2,3-cd]pyrene	50		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Dibenz(a,h)anthracene	16		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1
Benzo[g,h,i]perylene	54		11		ug/Kg	☼	09/07/18 09:11	09/10/18 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	50		23 - 120	09/07/18 09:11	09/10/18 11:53	1
2-Fluorobiphenyl (Surr)	52		38 - 123	09/07/18 09:11	09/10/18 11:53	1
p-Terphenyl-d14	54	X	68 - 136	09/07/18 09:11	09/10/18 11:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	16		11		mg/Kg	☼	09/07/18 11:05	09/08/18 17:13	1
Residual Range Organics (RRO) (C25-C36)	87		28		mg/Kg	☼	09/07/18 11:05	09/08/18 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	102		50 - 150	09/07/18 11:05	09/08/18 17:13	1
n-Triacontane-d62	101		50 - 150	09/07/18 11:05	09/08/18 17:13	1

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

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

Lab Sample ID: MB 590-18726/1-A
 Matrix: Solid
 Analysis Batch: 18737

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18726

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
2-Methylnaphthalene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
1-Methylnaphthalene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Acenaphthylene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Acenaphthene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Fluorene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Phenanthrene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Anthracene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Fluoranthene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Pyrene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Benzo[a]anthracene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Chrysene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Benzo[b]fluoranthene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Benzo[k]fluoranthene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Benzo[a]pyrene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Dibenz(a,h)anthracene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1
Benzo[g,h,i]perylene	ND		10		ug/Kg		09/07/18 09:11	09/07/18 13:05	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	74		23 - 120	09/07/18 09:11	09/07/18 13:05	1
2-Fluorobiphenyl (Surr)	74		38 - 123	09/07/18 09:11	09/07/18 13:05	1
p-Terphenyl-d14	80		68 - 136	09/07/18 09:11	09/07/18 13:05	1

Lab Sample ID: LCS 590-18726/2-A
 Matrix: Solid
 Analysis Batch: 18737

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18726

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	267	205		ug/Kg		77	41 - 121
2-Methylnaphthalene	267	216		ug/Kg		81	39 - 132
1-Methylnaphthalene	267	243		ug/Kg		91	46 - 131
Acenaphthylene	267	192		ug/Kg		72	56 - 123
Acenaphthene	267	214		ug/Kg		80	43 - 140
Fluorene	267	208		ug/Kg		78	54 - 131
Phenanthrene	267	233		ug/Kg		87	55 - 141
Anthracene	267	250		ug/Kg		94	60 - 129
Fluoranthene	267	245		ug/Kg		92	63 - 141
Pyrene	267	223		ug/Kg		84	62 - 139
Benzo[a]anthracene	267	236		ug/Kg		89	61 - 136
Chrysene	267	245		ug/Kg		92	57 - 144
Benzo[b]fluoranthene	267	238		ug/Kg		89	66 - 141
Benzo[k]fluoranthene	267	243		ug/Kg		91	63 - 150
Benzo[a]pyrene	267	242		ug/Kg		91	60 - 133
Indeno[1,2,3-cd]pyrene	267	254		ug/Kg		95	55 - 142
Dibenz(a,h)anthracene	267	258		ug/Kg		97	60 - 150
Benzo[g,h,i]perylene	267	260		ug/Kg		97	58 - 147

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

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

Lab Sample ID: LCS 590-18726/2-A
 Matrix: Solid
 Analysis Batch: 18737

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18726

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	64		23 - 120
2-Fluorobiphenyl (Surr)	73		38 - 123
p-Terphenyl-d14	80		68 - 136

Lab Sample ID: LCSD 590-18726/3-A
 Matrix: Solid
 Analysis Batch: 18737

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18726

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD Limit
							Limits	RPD	
Naphthalene	267	199		ug/Kg		74	41 - 121	3	35
2-Methylnaphthalene	267	215		ug/Kg		81	39 - 132	0	35
1-Methylnaphthalene	267	232		ug/Kg		87	46 - 131	5	35
Acenaphthylene	267	208		ug/Kg		78	56 - 123	8	35
Acenaphthene	267	211		ug/Kg		79	43 - 140	1	35
Fluorene	267	224		ug/Kg		84	54 - 131	7	35
Phenanthrene	267	214		ug/Kg		80	55 - 141	8	35
Anthracene	267	230		ug/Kg		86	60 - 129	8	35
Fluoranthene	267	224		ug/Kg		84	63 - 141	9	35
Pyrene	267	212		ug/Kg		79	62 - 139	5	35
Benzo[a]anthracene	267	228		ug/Kg		86	61 - 136	3	35
Chrysene	267	231		ug/Kg		87	57 - 144	6	35
Benzo[b]fluoranthene	267	231		ug/Kg		87	66 - 141	3	35
Benzo[k]fluoranthene	267	223		ug/Kg		83	63 - 150	9	35
Benzo[a]pyrene	267	221		ug/Kg		83	60 - 133	9	35
Indeno[1,2,3-cd]pyrene	267	240		ug/Kg		90	55 - 142	6	35
Dibenz(a,h)anthracene	267	241		ug/Kg		90	60 - 150	7	35
Benzo[g,h,i]perylene	267	237		ug/Kg		89	58 - 147	9	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	71		23 - 120
2-Fluorobiphenyl (Surr)	72		38 - 123
p-Terphenyl-d14	78		68 - 136

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

Lab Sample ID: MB 590-18736/1-A
 Matrix: Solid
 Analysis Batch: 18725

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18736

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		09/07/18 11:05	09/08/18 11:23	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		09/07/18 11:05	09/08/18 11:23	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
o-Terphenyl	90		50 - 150	09/07/18 11:05	09/08/18 11:23	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

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

Lab Sample ID: MB 590-18736/1-A
 Matrix: Solid
 Analysis Batch: 18725

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18736

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
<i>n</i> -Triacontane-d62	85		50 - 150	09/07/18 11:05	09/08/18 11:23	1

Lab Sample ID: LCS 590-18736/2-A
 Matrix: Solid
 Analysis Batch: 18725

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18736

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (DRO) (C10-C25)	66.7	53.7		mg/Kg		80	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	61.2		mg/Kg		92	50 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	92		50 - 150
<i>n</i> -Triacontane-d62	90		50 - 150

Lab Sample ID: LCSD 590-18736/21-A
 Matrix: Solid
 Analysis Batch: 18725

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 18736

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Diesel Range Organics (DRO) (C10-C25)	66.7	51.6		mg/Kg		77	50 - 150	4	25
Residual Range Organics (RRO) (C25-C36)	66.7	61.3		mg/Kg		92	50 - 150	0	25

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	94		50 - 150
<i>n</i> -Triacontane-d62	92		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-1-E (8-9)

Date Collected: 09/06/18 12:05

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18743	09/07/18 15:33	MO	TAL SPK

Client Sample ID: EX-1-E (8-9)

Date Collected: 09/06/18 12:05

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-1

Matrix: Solid

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.65 g	2 mL	18726	09/07/18 09:11	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18737	09/07/18 18:03	NMI	TAL SPK
Total/NA	Prep	3550C			15.83 g	5 mL	18736	09/07/18 11:05	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18725	09/08/18 15:36	NMI	TAL SPK

Client Sample ID: EX-2-E (8-9)

Date Collected: 09/06/18 12:10

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18743	09/07/18 15:33	MO	TAL SPK

Client Sample ID: EX-2-E (8-9)

Date Collected: 09/06/18 12:10

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-2

Matrix: Solid

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.19 g	2 mL	18726	09/07/18 09:11	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18737	09/07/18 18:28	NMI	TAL SPK
Total/NA	Prep	3550C			15.23 g	5 mL	18736	09/07/18 11:05	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18725	09/08/18 15:55	NMI	TAL SPK

Client Sample ID: EX-3-E (8-9)

Date Collected: 09/06/18 12:15

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18743	09/07/18 15:33	MO	TAL SPK

Client Sample ID: EX-3-E (8-9)

Date Collected: 09/06/18 12:15

Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-3

Matrix: Solid

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.47 g	2 mL	18726	09/07/18 09:11	MO	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-3-E (8-9)

Date Collected: 09/06/18 12:15
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-3

Matrix: Solid
 Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18737	09/07/18 18:53	NMI	TAL SPK
Total/NA	Prep	3550C			15.24 g	5 mL	18736	09/07/18 11:05	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18725	09/08/18 16:15	NMI	TAL SPK

Client Sample ID: EX-4-E (8-9)

Date Collected: 09/06/18 12:20
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18743	09/07/18 15:33	MO	TAL SPK

Client Sample ID: EX-4-E (8-9)

Date Collected: 09/06/18 12:20
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-4

Matrix: Solid
 Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.01 g	2 mL	18726	09/07/18 09:11	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18737	09/07/18 19:18	NMI	TAL SPK
Total/NA	Prep	3550C			15.04 g	5 mL	18736	09/07/18 11:05	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18725	09/08/18 16:34	NMI	TAL SPK

Client Sample ID: EX-5-E (8-9)

Date Collected: 09/06/18 12:25
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18743	09/07/18 15:33	MO	TAL SPK

Client Sample ID: EX-5-E (8-9)

Date Collected: 09/06/18 12:25
 Date Received: 09/06/18 14:50

Lab Sample ID: 590-9328-5

Matrix: Solid
 Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.27 g	2 mL	18726	09/07/18 09:11	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18737	09/07/18 19:43	NMI	TAL SPK
Total/NA	Prep	3550C			15.01 g	5 mL	18736	09/07/18 11:05	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18725	09/08/18 16:54	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Client Sample ID: EX-6-N (3-4)

Lab Sample ID: 590-9328-6

Date Collected: 09/06/18 12:40

Matrix: Solid

Date Received: 09/06/18 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18743	09/07/18 15:33	MO	TAL SPK

Client Sample ID: EX-6-N (3-4)

Lab Sample ID: 590-9328-6

Date Collected: 09/06/18 12:40

Matrix: Solid

Date Received: 09/06/18 14:50

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.10 g	2 mL	18726	09/07/18 09:11	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18757	09/10/18 11:53	NMI	TAL SPK
Total/NA	Prep	3550C			15.14 g	5 mL	18736	09/07/18 11:05	MO	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18725	09/08/18 17:13	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

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

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9328-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

9/10/2018

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <i>GeoEngineers</i>		INVOICE TO: <i>GET</i>		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses Petroleum Hydrocarbon Analyses OTHER Specify <small>* Turnaround Requests less than stipulated may incur Rush Charges</small>							
REPORT TO ADDRESS: <i>jmlee@geoengineers.com</i> <i>523 E. Second Ave</i> <i>Spokane, WA 99202</i>		P.O. NUMBER:									
PHONE: <i>509-363-3125</i> FAX:		PRESERVATIVE		10 7 5 4 3 2 1 <1 <small>STD</small> 5 4 3 2 1 <1 <small>STD</small>							
PROJECT NAME: <i>Arista - Service Center</i>		REQUESTED ANALYSES		MATRIX (W, S, O) # OF CONT. LOCATION/ COMMENTS TA WO ID							
PROJECT NUMBER: <i>2522-079-01</i>				↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓							
SAMPLED BY: <i>JML</i>											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NUMPH-DP	PAHs								
<i>Ex-1-E(3-9)</i>	<i>9/6/2018 1205</i>	<i>X</i>	<i>X</i>								
<i>Ex-2-E(3-9)</i>	<i>1210</i>	<i>X</i>	<i>X</i>								
<i>Ex-3-E(3-9)</i>	<i>1215</i>	<i>X</i>	<i>X</i>								
<i>Ex-4-E(3-9)</i>	<i>1220</i>	<i>X</i>	<i>X</i>								
<i>Ex-5-E(3-9)</i>	<i>1225</i>	<i>X</i>	<i>X</i>								
<i>Ex-6-N(3-9)</i>	<i>1240</i>	<i>X</i>	<i>X</i>								
RELEASED BY: <i>Josh Lee</i>	FIRM: <i>GET</i>	DATE: <i>9/6/2018</i>	TIME: <i>1450</i>	RECEIVED BY: <i>Sprika Krate</i>	FIRM: <i>TIA dpo</i>	DATE: <i>9/6/18</i>	TIME: <i>1450</i>				
ADDITIONAL REMARKS:						TEMP. <i>2.99</i> PAGE <i>1</i> OF <i>1</i> IROKLY 000 (1/14)					



590-9328 Chain of Custody

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9328-1

Login Number: 9328

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

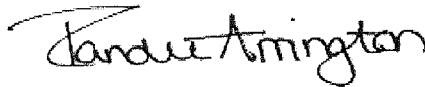
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9344-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
9/13/2018 3:52:37 PM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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www.testamericainc.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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Client Sample Results	6
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Receipt Checklists	24

Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Job ID: 590-9344-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 9/10/2018 4:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC/MS Semi VOA

Method 8270D SIM: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: Bay-7 (23-24) (590-9344-1), Bay-4 (15-16) (590-9344-7) and Bay-5 (18-19) (590-9344-8).

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

GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to oil overlap in the following samples: Bay-7 (23-24) (590-9344-1), Bay-5/7 (12-13) (590-9344-2), Bay-1 (18-19) (590-9344-3), Bay-2 (19-20) (590-9344-4), Bay-1/2 W (15-16) (590-9344-5), Bay-4 (15-16) (590-9344-7), Bay-5 (18-19) (590-9344-8) and (590-9344-A-1-A DU).

Method NWTPH-Dx: Surrogate recovery for the following sample was outside control limits: Bay-7 (23-24) (590-9344-1). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 590-18791 recovered above the upper control limit for Residual Range Organics (RRO) (C25-C36). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Bay-3 (17-18) (590-9344-6) and (MB 590-18797/1-A).

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9344-1	Bay-7 (23-24)	Solid	09/07/18 09:30	09/10/18 16:40
590-9344-2	Bay-5/7 (12-13)	Solid	09/07/18 11:00	09/10/18 16:40
590-9344-3	Bay-1 (18-19)	Solid	09/10/18 09:00	09/10/18 16:40
590-9344-4	Bay-2 (19-20)	Solid	09/10/18 09:30	09/10/18 16:40
590-9344-5	Bay-1/2 W (15-16)	Solid	09/10/18 09:45	09/10/18 16:40
590-9344-6	Bay-3 (17-18)	Solid	09/10/18 11:00	09/10/18 16:40
590-9344-7	Bay-4 (15-16)	Solid	09/10/18 11:15	09/10/18 16:40
590-9344-8	Bay-5 (18-19)	Solid	09/10/18 13:20	09/10/18 16:40

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-7 (23-24)

Lab Sample ID: 590-9344-1

Date Collected: 09/07/18 09:30

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Acenaphthylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Acenaphthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Fluorene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Phenanthrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Chrysene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 00:33	1
Benzo[b]fluoranthene	ND		110		ug/Kg	*	09/12/18 10:01	09/13/18 12:53	10
Benzo[k]fluoranthene	ND		110		ug/Kg	*	09/12/18 10:01	09/13/18 12:53	10
Benzo[a]pyrene	ND		110		ug/Kg	*	09/12/18 10:01	09/13/18 12:53	10
Indeno[1,2,3-cd]pyrene	ND		110		ug/Kg	*	09/12/18 10:01	09/13/18 12:53	10
Dibenz(a,h)anthracene	ND		110		ug/Kg	*	09/12/18 10:01	09/13/18 12:53	10
Benzo[g,h,i]perylene	ND		110		ug/Kg	*	09/12/18 10:01	09/13/18 12:53	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		23 - 120	09/12/18 10:01	09/13/18 00:33	1
Nitrobenzene-d5	88		23 - 120	09/12/18 10:01	09/13/18 12:53	10
2-Fluorobiphenyl (Surr)	90		38 - 123	09/12/18 10:01	09/13/18 00:33	1
2-Fluorobiphenyl (Surr)	89		38 - 123	09/12/18 10:01	09/13/18 12:53	10
p-Terphenyl-d14	92		68 - 136	09/12/18 10:01	09/13/18 12:53	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	6800		230		mg/Kg	*	09/11/18 15:22	09/12/18 13:27	20
Residual Range Organics (RRO) (C25-C36)	25000		570		mg/Kg	*	09/11/18 15:22	09/12/18 13:27	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	58		50 - 150	09/11/18 15:22	09/12/18 13:27	20
n-Triacontane-d62	35	X	50 - 150	09/11/18 15:22	09/12/18 13:27	20

Client Sample ID: Bay-5/7 (12-13)

Lab Sample ID: 590-9344-2

Date Collected: 09/07/18 11:00

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 94.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Acenaphthylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Acenaphthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Fluorene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Phenanthrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-5/7 (12-13)

Lab Sample ID: 590-9344-2

Date Collected: 09/07/18 11:00

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 94.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Chrysene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Benzo[b]fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 01:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	52		23 - 120	09/12/18 10:01	09/13/18 01:48	1
2-Fluorobiphenyl (Surr)	72		38 - 123	09/12/18 10:01	09/13/18 01:48	1
p-Terphenyl-d14	101		68 - 136	09/12/18 10:01	09/13/18 01:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	14		10		mg/Kg	*	09/11/18 15:22	09/12/18 13:48	1
Residual Range Organics (RRO) (C25-C36)	52		26		mg/Kg	*	09/11/18 15:22	09/12/18 13:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	89		50 - 150	09/11/18 15:22	09/12/18 13:48	1
n-Triacontane-d62	85		50 - 150	09/11/18 15:22	09/12/18 13:48	1

Client Sample ID: Bay-1 (18-19)

Lab Sample ID: 590-9344-3

Date Collected: 09/10/18 09:00

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 94.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Acenaphthylene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Acenaphthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Fluorene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Phenanthrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Fluoranthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Pyrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Chrysene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 02:13	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-1 (18-19)

Lab Sample ID: 590-9344-3

Date Collected: 09/10/18 09:00

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 94.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		23 - 120	09/12/18 10:01	09/13/18 02:13	1
2-Fluorobiphenyl (Surr)	80		38 - 123	09/12/18 10:01	09/13/18 02:13	1
p-Terphenyl-d14	100		68 - 136	09/12/18 10:01	09/13/18 02:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	490		100		mg/Kg	☼	09/11/18 15:22	09/12/18 14:24	10
Residual Range Organics (RRO) (C25-C36)	2600		260		mg/Kg	☼	09/11/18 15:22	09/12/18 14:24	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	66		50 - 150	09/11/18 15:22	09/12/18 14:24	10
n-Triacontane-d62	63		50 - 150	09/11/18 15:22	09/12/18 14:24	10

Client Sample ID: Bay-2 (19-20)

Lab Sample ID: 590-9344-4

Date Collected: 09/10/18 09:30

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 96.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Acenaphthylene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Acenaphthene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Fluorene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Phenanthrene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Anthracene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Fluoranthene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Pyrene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Benzo[a]anthracene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Chrysene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Benzo[b]fluoranthene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/12/18 10:01	09/13/18 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	84		23 - 120	09/12/18 10:01	09/13/18 02:38	1
2-Fluorobiphenyl (Surr)	95		38 - 123	09/12/18 10:01	09/13/18 02:38	1
p-Terphenyl-d14	105		68 - 136	09/12/18 10:01	09/13/18 02:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	710		100		mg/Kg	☼	09/11/18 15:22	09/12/18 14:45	10
Residual Range Organics (RRO) (C25-C36)	3700		250		mg/Kg	☼	09/11/18 15:22	09/12/18 14:45	10

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-2 (19-20)

Date Collected: 09/10/18 09:30
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-4

Matrix: Solid
 Percent Solids: 96.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	75		50 - 150	09/11/18 15:22	09/12/18 14:45	10
<i>n</i> -Triacontane-d62	78		50 - 150	09/11/18 15:22	09/12/18 14:45	10

Client Sample ID: Bay-1/2 W (15-16)

Date Collected: 09/10/18 09:45
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-5

Matrix: Solid
 Percent Solids: 90.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Acenaphthylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Acenaphthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Fluorene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Phenanthrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Chrysene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Benzo[b]fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	60		23 - 120	09/12/18 10:01	09/13/18 03:03	1
2-Fluorobiphenyl (Surr)	86		38 - 123	09/12/18 10:01	09/13/18 03:03	1
<i>p</i> -Terphenyl-d14	104		68 - 136	09/12/18 10:01	09/13/18 03:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	140		11		mg/Kg	*	09/11/18 15:22	09/12/18 15:34	1
Residual Range Organics (RRO) (C25-C36)	650		27		mg/Kg	*	09/11/18 15:22	09/12/18 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	90		50 - 150	09/11/18 15:22	09/12/18 15:34	1
<i>n</i> -Triacontane-d62	91		50 - 150	09/11/18 15:22	09/12/18 15:34	1

Client Sample ID: Bay-3 (17-18)

Date Collected: 09/10/18 11:00
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-6

Matrix: Solid
 Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-3 (17-18)

Lab Sample ID: 590-9344-6

Date Collected: 09/10/18 11:00

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Acenaphthylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Acenaphthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Fluorene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Phenanthrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Chrysene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Benzo[b]fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/12/18 10:01	09/13/18 03:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	48		23 - 120	09/12/18 10:01	09/13/18 03:28	1
2-Fluorobiphenyl (Surr)	65		38 - 123	09/12/18 10:01	09/13/18 03:28	1
p-Terphenyl-d14	94		68 - 136	09/12/18 10:01	09/13/18 03:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/11/18 15:22	09/12/18 04:10	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	*	09/11/18 15:22	09/12/18 04:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150	09/11/18 15:22	09/12/18 04:10	1
n-Triacontane-d62	97		50 - 150	09/11/18 15:22	09/12/18 04:10	1

Client Sample ID: Bay-4 (15-16)

Lab Sample ID: 590-9344-7

Date Collected: 09/10/18 11:15

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 94.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Acenaphthylene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Acenaphthene	13		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Fluorene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Phenanthrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Fluoranthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Pyrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1
Chrysene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 03:53	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-4 (15-16)

Lab Sample ID: 590-9344-7

Date Collected: 09/10/18 11:15

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 94.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:18	10
Benzo[k]fluoranthene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:18	10
Benzo[a]pyrene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:18	10
Indeno[1,2,3-cd]pyrene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:18	10
Dibenz(a,h)anthracene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:18	10
Benzo[g,h,i]perylene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:18	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	85		23 - 120	09/12/18 10:01	09/13/18 03:53	1
Nitrobenzene-d5	114		23 - 120	09/12/18 10:01	09/13/18 13:18	10
2-Fluorobiphenyl (Surr)	92		38 - 123	09/12/18 10:01	09/13/18 03:53	1
2-Fluorobiphenyl (Surr)	82		38 - 123	09/12/18 10:01	09/13/18 13:18	10
p-Terphenyl-d14	116		68 - 136	09/12/18 10:01	09/13/18 03:53	1
p-Terphenyl-d14	96		68 - 136	09/12/18 10:01	09/13/18 13:18	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	2100		100		mg/Kg	*	09/11/18 15:22	09/12/18 15:54	10
Residual Range Organics (RRO) (C25-C36)	5600		260		mg/Kg	*	09/11/18 15:22	09/12/18 15:54	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	83		50 - 150	09/11/18 15:22	09/12/18 15:54	10
n-Triacontane-d62	99		50 - 150	09/11/18 15:22	09/12/18 15:54	10

Client Sample ID: Bay-5 (18-19)

Lab Sample ID: 590-9344-8

Date Collected: 09/10/18 13:20

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 93.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Acenaphthylene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Acenaphthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Fluorene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Phenanthrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Fluoranthene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Pyrene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Chrysene	ND		10		ug/Kg	*	09/12/18 10:01	09/13/18 04:17	1
Benzo[b]fluoranthene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:43	10
Benzo[k]fluoranthene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:43	10
Benzo[a]pyrene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:43	10
Indeno[1,2,3-cd]pyrene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:43	10
Dibenz(a,h)anthracene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:43	10
Benzo[g,h,i]perylene	ND		100		ug/Kg	*	09/12/18 10:01	09/13/18 13:43	10

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-5 (18-19)

Lab Sample ID: 590-9344-8

Date Collected: 09/10/18 13:20

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 93.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		23 - 120	09/12/18 10:01	09/13/18 04:17	1
Nitrobenzene-d5	89		23 - 120	09/12/18 10:01	09/13/18 13:43	10
2-Fluorobiphenyl (Surr)	81		38 - 123	09/12/18 10:01	09/13/18 04:17	1
2-Fluorobiphenyl (Surr)	78		38 - 123	09/12/18 10:01	09/13/18 13:43	10
p-Terphenyl-d14	95		68 - 136	09/12/18 10:01	09/13/18 04:17	1
p-Terphenyl-d14	88		68 - 136	09/12/18 10:01	09/13/18 13:43	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	1600		110		mg/Kg	✱	09/11/18 15:22	09/12/18 16:15	10
Residual Range Organics (RRO) (C25-C36)	4300		270		mg/Kg	✱	09/11/18 15:22	09/12/18 16:15	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150	09/11/18 15:22	09/12/18 16:15	10
n-Triacontane-d62	71		50 - 150	09/11/18 15:22	09/12/18 16:15	10

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

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

Lab Sample ID: MB 590-18812/1-A
Matrix: Solid
Analysis Batch: 18810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18812

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
2-Methylnaphthalene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
1-Methylnaphthalene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Acenaphthylene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Acenaphthene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Fluorene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Phenanthrene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Anthracene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Fluoranthene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Pyrene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Benzo[a]anthracene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Chrysene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Benzo[b]fluoranthene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Benzo[k]fluoranthene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Benzo[a]pyrene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Dibenz(a,h)anthracene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1
Benzo[g,h,i]perylene	ND		10		ug/Kg		09/12/18 10:01	09/12/18 21:15	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	74		23 - 120	09/12/18 10:01	09/12/18 21:15	1
2-Fluorobiphenyl (Surr)	75		38 - 123	09/12/18 10:01	09/12/18 21:15	1
p-Terphenyl-d14	99		68 - 136	09/12/18 10:01	09/12/18 21:15	1

Lab Sample ID: LCS 590-18812/2-A
Matrix: Solid
Analysis Batch: 18810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	267	234		ug/Kg		88	41 - 121
2-Methylnaphthalene	267	247		ug/Kg		92	39 - 132
1-Methylnaphthalene	267	269		ug/Kg		101	46 - 131
Acenaphthylene	267	254		ug/Kg		95	56 - 123
Acenaphthene	267	250		ug/Kg		94	43 - 140
Fluorene	267	250		ug/Kg		94	54 - 131
Phenanthrene	267	273		ug/Kg		102	55 - 141
Anthracene	267	321		ug/Kg		120	60 - 129
Fluoranthene	267	283		ug/Kg		106	63 - 141
Pyrene	267	279		ug/Kg		105	62 - 139
Benzo[a]anthracene	267	279		ug/Kg		105	61 - 136
Chrysene	267	283		ug/Kg		106	57 - 144
Benzo[b]fluoranthene	267	301		ug/Kg		113	66 - 141
Benzo[k]fluoranthene	267	287		ug/Kg		108	63 - 150
Benzo[a]pyrene	267	278		ug/Kg		104	60 - 133
Indeno[1,2,3-cd]pyrene	267	293		ug/Kg		110	55 - 142
Dibenz(a,h)anthracene	267	293		ug/Kg		110	60 - 150
Benzo[g,h,i]perylene	267	290		ug/Kg		109	58 - 147

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

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

Lab Sample ID: LCS 590-18812/2-A
 Matrix: Solid
 Analysis Batch: 18810

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18812

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	81		23 - 120
2-Fluorobiphenyl (Surr)	87		38 - 123
p-Terphenyl-d14	99		68 - 136

Lab Sample ID: 590-9344-2 MS
 Matrix: Solid
 Analysis Batch: 18810

Client Sample ID: Bay-5/7 (12-13)
 Prep Type: Total/NA
 Prep Batch: 18812

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Naphthalene	ND		282	206		ug/Kg	*	73	41 - 121
2-Methylnaphthalene	ND		282	235		ug/Kg	*	83	39 - 132
1-Methylnaphthalene	ND		282	248		ug/Kg	*	88	46 - 131
Acenaphthylene	ND		282	232		ug/Kg	*	82	56 - 123
Acenaphthene	ND		282	255		ug/Kg	*	90	43 - 140
Fluorene	ND		282	266		ug/Kg	*	94	54 - 131
Phenanthrene	ND		282	286		ug/Kg	*	101	55 - 141
Anthracene	ND		282	326		ug/Kg	*	116	60 - 129
Fluoranthene	ND		282	315		ug/Kg	*	112	63 - 141
Pyrene	ND		282	319		ug/Kg	*	113	62 - 139
Benzo[a]anthracene	ND		282	319		ug/Kg	*	113	61 - 136
Chrysene	ND		282	315		ug/Kg	*	112	57 - 144
Benzo[b]fluoranthene	ND		282	315		ug/Kg	*	112	66 - 141
Benzo[k]fluoranthene	ND		282	318		ug/Kg	*	113	63 - 150
Benzo[a]pyrene	ND		282	299		ug/Kg	*	106	60 - 133
Indeno[1,2,3-cd]pyrene	ND		282	289		ug/Kg	*	102	55 - 142
Dibenz(a,h)anthracene	ND		282	289		ug/Kg	*	103	60 - 150
Benzo[g,h,i]perylene	ND		282	279		ug/Kg	*	99	58 - 147

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	42		23 - 120
2-Fluorobiphenyl (Surr)	74		38 - 123
p-Terphenyl-d14	94		68 - 136

Lab Sample ID: 590-9344-2 MSD
 Matrix: Solid
 Analysis Batch: 18810

Client Sample ID: Bay-5/7 (12-13)
 Prep Type: Total/NA
 Prep Batch: 18812

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	
	Result	Qualifier		Result	Qualifier					RPD	Limit
Naphthalene	ND		267	207		ug/Kg	*	78	41 - 121	1	35
2-Methylnaphthalene	ND		267	226		ug/Kg	*	85	39 - 132	4	35
1-Methylnaphthalene	ND		267	242		ug/Kg	*	90	46 - 131	3	35
Acenaphthylene	ND		267	242		ug/Kg	*	90	56 - 123	4	35
Acenaphthene	ND		267	248		ug/Kg	*	93	43 - 140	3	35
Fluorene	ND		267	262		ug/Kg	*	98	54 - 131	2	35
Phenanthrene	ND		267	261		ug/Kg	*	98	55 - 141	9	35
Anthracene	ND		267	320		ug/Kg	*	120	60 - 129	2	35
Fluoranthene	ND		267	313		ug/Kg	*	117	63 - 141	1	35
Pyrene	ND		267	291		ug/Kg	*	109	62 - 139	9	35

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

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

Lab Sample ID: 590-9344-2 MSD
 Matrix: Solid
 Analysis Batch: 18810

Client Sample ID: Bay-5/7 (12-13)
 Prep Type: Total/NA
 Prep Batch: 18812

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzo[a]anthracene	ND		267	296		ug/Kg	*	111	61 - 136	7	35
Chrysene	ND		267	290		ug/Kg	*	109	57 - 144	8	35
Benzo[b]fluoranthene	ND		267	306		ug/Kg	*	115	66 - 141	3	35
Benzo[k]fluoranthene	ND		267	301		ug/Kg	*	113	63 - 150	6	35
Benzo[a]pyrene	ND		267	287		ug/Kg	*	108	60 - 133	4	35
Indeno[1,2,3-cd]pyrene	ND		267	271		ug/Kg	*	101	55 - 142	6	35
Dibenz(a,h)anthracene	ND		267	273		ug/Kg	*	102	60 - 150	6	35
Benzo[g,h,i]perylene	ND		267	261		ug/Kg	*	98	58 - 147	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5	49		23 - 120
2-Fluorobiphenyl (Surr)	78		38 - 123
p-Terphenyl-d14	97		68 - 136

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

Lab Sample ID: MB 590-18797/1-A
 Matrix: Solid
 Analysis Batch: 18791

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18797

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		09/11/18 15:22	09/12/18 01:36	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		09/11/18 15:22	09/12/18 01:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150	09/11/18 15:22	09/12/18 01:36	1
n-Triacontane-d62	90		50 - 150	09/11/18 15:22	09/12/18 01:36	1

Lab Sample ID: LCS 590-18797/2-A
 Matrix: Solid
 Analysis Batch: 18809

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (DRO) (C10-C25)	66.7	55.8		mg/Kg		84	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	65.8		mg/Kg		99	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	95		50 - 150
n-Triacontane-d62	92		50 - 150

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

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

Lab Sample ID: 590-9344-1 DU

Matrix: Solid

Analysis Batch: 18809

Client Sample ID: Bay-7 (23-24)

Prep Type: Total/NA

Prep Batch: 18797

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Diesel Range Organics (DRO) (C10-C25)	6800		5400		m g/Kg	✘	23	40
Residual Range Organics (RRO) (C25-C36)	25000		20000		m g/Kg	✘	23	40

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	78		50 - 150
<i>n</i> -Triacontane-d62	78		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-7 (23-24)

Date Collected: 09/07/18 09:30

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Client Sample ID: Bay-7 (23-24)

Date Collected: 09/07/18 09:30

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-1

Matrix: Solid

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.35 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 00:33	NMI	TAL SPK
Total/NA	Prep	3550C			15.35 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		10			18832	09/13/18 12:53	NMI	TAL SPK
Total/NA	Prep	3550C			15.06 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		20			18809	09/12/18 13:27	NMI	TAL SPK

Client Sample ID: Bay-5/7 (12-13)

Date Collected: 09/07/18 11:00

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Client Sample ID: Bay-5/7 (12-13)

Date Collected: 09/07/18 11:00

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-2

Matrix: Solid

Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.09 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 01:48	NMI	TAL SPK
Total/NA	Prep	3550C			15.11 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18809	09/12/18 13:48	NMI	TAL SPK

Client Sample ID: Bay-1 (18-19)

Date Collected: 09/10/18 09:00

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-1 (18-19)

Date Collected: 09/10/18 09:00

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-3

Matrix: Solid

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.19 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 02:13	NMI	TAL SPK
Total/NA	Prep	3550C			15.31 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			18809	09/12/18 14:24	NMI	TAL SPK

Client Sample ID: Bay-2 (19-20)

Date Collected: 09/10/18 09:30

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Client Sample ID: Bay-2 (19-20)

Date Collected: 09/10/18 09:30

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-4

Matrix: Solid

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.33 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 02:38	NMI	TAL SPK
Total/NA	Prep	3550C			15.48 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			18809	09/12/18 14:45	NMI	TAL SPK

Client Sample ID: Bay-1/2 W (15-16)

Date Collected: 09/10/18 09:45

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Client Sample ID: Bay-1/2 W (15-16)

Date Collected: 09/10/18 09:45

Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-5

Matrix: Solid

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.60 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 03:03	NMI	TAL SPK
Total/NA	Prep	3550C			15.19 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18809	09/12/18 15:34	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-3 (17-18)

Date Collected: 09/10/18 11:00
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Client Sample ID: Bay-3 (17-18)

Date Collected: 09/10/18 11:00
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-6

Matrix: Solid
 Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.60 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 03:28	NMI	TAL SPK
Total/NA	Prep	3550C			15.11 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18791	09/12/18 04:10	NMI	TAL SPK

Client Sample ID: Bay-4 (15-16)

Date Collected: 09/10/18 11:15
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Client Sample ID: Bay-4 (15-16)

Date Collected: 09/10/18 11:15
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-7

Matrix: Solid
 Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			16.00 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 03:53	NMI	TAL SPK
Total/NA	Prep	3550C			16.00 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		10			18832	09/13/18 13:18	NMI	TAL SPK
Total/NA	Prep	3550C			15.29 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			18809	09/12/18 15:54	NMI	TAL SPK

Client Sample ID: Bay-5 (18-19)

Date Collected: 09/10/18 13:20
 Date Received: 09/10/18 16:40

Lab Sample ID: 590-9344-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18811	09/12/18 09:40	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Client Sample ID: Bay-5 (18-19)

Lab Sample ID: 590-9344-8

Date Collected: 09/10/18 13:20

Matrix: Solid

Date Received: 09/10/18 16:40

Percent Solids: 93.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.49 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18810	09/13/18 04:17	NMI	TAL SPK
Total/NA	Prep	3550C			15.49 g	2 mL	18812	09/12/18 10:01	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		10			18832	09/13/18 13:43	NMI	TAL SPK
Total/NA	Prep	3550C			15.16 g	5 mL	18797	09/11/18 15:22	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			18809	09/12/18 16:15	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9344-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



590-9344 Chain of Custody

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 101 Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

9/13/2018

LABORATORY REPORT

Work Order #:

CLIENT: <i>Geotronics</i>			INVOICE TO:										TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses 10 7 5 4 3 2 1 <1 STD Petroleum Hydrocarbon Analyses 5 4 3 2 1 <1 STD OTHER Specify * Turnaround Requests less than standard may incur Rush Charges															
REPORT TO: <i>info@geotronics.com</i>			P.O. NUMBER:																									
ADDRESS: <i>523 E. Second Ave Spokane, WA 99202</i>			PRESERVATIVE:										MATRIX (W, S, O)				# OF CONT.				LOCATION/ COMMENTS				FA WO ID			
PHONE: <i>509-363-3125</i> FAX:			PROJECT NAME: <i>Avista - Service Center</i>										REQUESTED ANALYSES:				S 2 2 dry TAT ↓ ↓ ↓											
PROJECT NUMBER: <i>2522-079-01</i>			SAMPLED BY: <i>JML</i>										PAHs								8270 SDA				MMPH			
CLIENT SAMPLE IDENTIFICATION			SAMPLING DATE/TIME			X		X																				
<i>Bey-7(23-24)</i>			<i>9/7/18 0930</i>			X		X																				
<i>Bey-7(12-13)</i>			<i>9/7/18 1100</i>			X		X																				
<i>Bey-1(18-19)</i>			<i>9/10/18 0900</i>			X		X																				
<i>Bey-2(19-20)</i>			<i>0930</i>			X		X																				
<i>Bey-1/2W(15-16)</i>			<i>0945</i>			X		X																				
<i>Bey-3(17-18)</i>			<i>1100</i>			X		X																				
<i>Bey-4(15-16)</i>			<i>1115</i>			X		X																				
<i>Bey-5(18-19)</i>			<i>1320</i>			X		X																				
RELEASED BY: <i>JL</i>			DATE: <i>9/10/2018</i>			RECEIVED BY: <i>[Signature]</i>				DATE: <i>9/10/18</i>																		
PRINT NAME: <i>Josh Lee</i>			FIRM: <i>GET</i>			PRINT NAME: <i>[Signature]</i>				FIRM: <i>GET</i>																		
RELEASED BY: <i>[Signature]</i>			DATE: <i>9/10/2018</i>			RECEIVED BY: <i>[Signature]</i>				DATE: <i>9/10/18</i>																		
PRINT NAME: <i>[Signature]</i>			FIRM: <i>GET</i>			PRINT NAME: <i>[Signature]</i>				FIRM: <i>JACPO</i>																		
ADDITIONAL REMARKS:			TEMP: <i>6.7C</i>			PAGE: <i>11</i>				FIRM: <i>JACPO</i>																		

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Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9344-1

Login Number: 9344

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

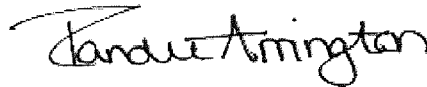
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9371-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
9/18/2018 1:56:05 PM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Job ID: 590-9371-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 9/13/2018 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 7.8° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: EX-7-E (12-13) (590-9371-1), EX-8-S (12-13) (590-9371-2), EX-9-W (12-13) (590-9371-3), EX-10-W (12-13) (590-9371-4), EX-11-W (12-13) (590-9371-5), EX-12-W (12-13) (590-9371-6), EX-13-W (12-13) (590-9371-7), EX-14-E (12-13) (590-9371-8), EX-15-E (12-13) (590-9371-9), EX-16-E (12-13) (590-9371-10), EX-17-E (12-13) (590-9371-11), EX-18-E (8-9) (590-9371-12) and EX-19-E (8-9) (590-9371-13). The samples are considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

GC/MS Semi VOA

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

GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to heavily weathered diesel in the following sample: EX-8-S (12-13) (590-9371-2).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to oil overlap in the following samples: EX-7-E (12-13) (590-9371-1) and EX-12-W (12-13) (590-9371-6).

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9371-1	EX-7-E (12-13)	Solid	09/13/18 08:40	09/13/18 13:00
590-9371-2	EX-8-S (12-13)	Solid	09/13/18 08:50	09/13/18 13:00
590-9371-3	EX-9-W (12-13)	Solid	09/13/18 08:55	09/13/18 13:00
590-9371-4	EX-10-W (12-13)	Solid	09/13/18 09:00	09/13/18 13:00
590-9371-5	EX-11-W (12-13)	Solid	09/13/18 09:05	09/13/18 13:00
590-9371-6	EX-12-W (12-13)	Solid	09/13/18 09:10	09/13/18 13:00
590-9371-7	EX-13-W (12-13)	Solid	09/13/18 09:20	09/13/18 13:00
590-9371-8	EX-14-E (12-13)	Solid	09/13/18 09:30	09/13/18 13:00
590-9371-9	EX-15-E (12-13)	Solid	09/13/18 09:40	09/13/18 13:00
590-9371-10	EX-16-E (12-13)	Solid	09/13/18 09:50	09/13/18 13:00
590-9371-11	EX-17-E (12-13)	Solid	09/13/18 10:00	09/13/18 13:00
590-9371-12	EX-18-E (8-9)	Solid	09/13/18 10:20	09/13/18 13:00
590-9371-13	EX-19-E (8-9)	Solid	09/13/18 10:30	09/13/18 13:00

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-7-E (12-13)

Lab Sample ID: 590-9371-1

Date Collected: 09/13/18 08:40

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 89.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Acenaphthylene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Acenaphthene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Fluorene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Phenanthrene	22		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Anthracene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Fluoranthene	24		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Pyrene	20		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Chrysene	11		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Benzo[b]fluoranthene	11		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 13:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	87		23 - 120	09/14/18 08:26	09/14/18 13:37	1
2-Fluorobiphenyl (Surr)	91		38 - 123	09/14/18 08:26	09/14/18 13:37	1
p-Terphenyl-d14	100		68 - 136	09/14/18 08:26	09/14/18 13:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	19		11		mg/Kg	*	09/17/18 10:20	09/17/18 14:49	1
Residual Range Organics (RRO) (C25-C36)	79		27		mg/Kg	*	09/17/18 10:20	09/17/18 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	09/17/18 10:20	09/17/18 14:49	1
n-Triacontane-d62	93		50 - 150	09/17/18 10:20	09/17/18 14:49	1

Client Sample ID: EX-8-S (12-13)

Lab Sample ID: 590-9371-2

Date Collected: 09/13/18 08:50

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 78.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
2-Methylnaphthalene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
1-Methylnaphthalene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Acenaphthylene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Acenaphthene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Fluorene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Phenanthrene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Anthracene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Fluoranthene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1
Pyrene	ND		13		ug/Kg	*	09/14/18 08:26	09/14/18 14:02	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-8-S (12-13)

Lab Sample ID: 590-9371-2

Date Collected: 09/13/18 08:50

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 78.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Chrysene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Benzo[b]fluoranthene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Benzo[k]fluoranthene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Benzo[a]pyrene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Indeno[1,2,3-cd]pyrene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Dibenz(a,h)anthracene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1
Benzo[g,h,i]perylene	ND		13		ug/Kg	☼	09/14/18 08:26	09/14/18 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	87		23 - 120	09/14/18 08:26	09/14/18 14:02	1
2-Fluorobiphenyl (Surr)	90		38 - 123	09/14/18 08:26	09/14/18 14:02	1
p-Terphenyl-d14	104		68 - 136	09/14/18 08:26	09/14/18 14:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	20		12		mg/Kg	☼	09/17/18 10:20	09/17/18 15:10	1
Residual Range Organics (RRO) (C25-C36)	ND		31		mg/Kg	☼	09/17/18 10:20	09/17/18 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	09/17/18 10:20	09/17/18 15:10	1
n-Triacontane-d62	94		50 - 150	09/17/18 10:20	09/17/18 15:10	1

Client Sample ID: EX-9-W (12-13)

Lab Sample ID: 590-9371-3

Date Collected: 09/13/18 08:55

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Acenaphthylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Acenaphthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Fluorene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Phenanthrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Benzo[a]anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Chrysene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Benzo[b]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 14:27	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-9-W (12-13)

Lab Sample ID: 590-9371-3

Date Collected: 09/13/18 08:55

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	51		23 - 120	09/14/18 08:26	09/14/18 14:27	1
2-Fluorobiphenyl (Surr)	60		38 - 123	09/14/18 08:26	09/14/18 14:27	1
p-Terphenyl-d14	92		68 - 136	09/14/18 08:26	09/14/18 14:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/17/18 10:20	09/17/18 15:31	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/17/18 10:20	09/17/18 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	98		50 - 150	09/17/18 10:20	09/17/18 15:31	1
n-Triacontane-d62	95		50 - 150	09/17/18 10:20	09/17/18 15:31	1

Client Sample ID: EX-10-W (12-13)

Lab Sample ID: 590-9371-4

Date Collected: 09/13/18 09:00

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	25		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
2-Methylnaphthalene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
1-Methylnaphthalene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Acenaphthylene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Acenaphthene	35		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Fluorene	22		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Phenanthrene	170		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Anthracene	51		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Fluoranthene	160		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Pyrene	140		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Benzo[a]anthracene	67		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Chrysene	73		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Benzo[b]fluoranthene	68		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Benzo[k]fluoranthene	27		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Benzo[a]pyrene	53		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Indeno[1,2,3-cd]pyrene	29		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1
Benzo[g,h,i]perylene	31		11		ug/Kg	☼	09/14/18 08:26	09/14/18 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		23 - 120	09/14/18 08:26	09/14/18 14:52	1
2-Fluorobiphenyl (Surr)	83		38 - 123	09/14/18 08:26	09/14/18 14:52	1
p-Terphenyl-d14	93		68 - 136	09/14/18 08:26	09/14/18 14:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/17/18 10:20	09/17/18 16:13	1
Residual Range Organics (RRO) (C25-C36)	30		26		mg/Kg	☼	09/17/18 10:20	09/17/18 16:13	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-10-W (12-13)

Date Collected: 09/13/18 09:00
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-4

Matrix: Solid
 Percent Solids: 93.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150	09/17/18 10:20	09/17/18 16:13	1
<i>n</i> -Triacontane-d62	94		50 - 150	09/17/18 10:20	09/17/18 16:13	1

Client Sample ID: EX-11-W (12-13)

Date Collected: 09/13/18 09:05
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-5

Matrix: Solid
 Percent Solids: 93.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Acenaphthylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Acenaphthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Fluorene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Phenanthrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Chrysene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		23 - 120	09/14/18 08:26	09/14/18 15:16	1
2-Fluorobiphenyl (Surr)	82		38 - 123	09/14/18 08:26	09/14/18 15:16	1
<i>p</i> -Terphenyl-d14	94		68 - 136	09/14/18 08:26	09/14/18 15:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/17/18 10:20	09/17/18 16:34	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/17/18 10:20	09/17/18 16:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	99		50 - 150	09/17/18 10:20	09/17/18 16:34	1
<i>n</i> -Triacontane-d62	97		50 - 150	09/17/18 10:20	09/17/18 16:34	1

Client Sample ID: EX-12-W (12-13)

Date Collected: 09/13/18 09:10
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-6

Matrix: Solid
 Percent Solids: 92.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	47		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
2-Methylnaphthalene	20		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-12-W (12-13)

Lab Sample ID: 590-9371-6

Date Collected: 09/13/18 09:10

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 92.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	16		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Acenaphthylene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Acenaphthene	130		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Fluorene	89		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Phenanthrene	770		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Anthracene	240		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Fluoranthene	810		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Pyrene	690		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Benzo[a]anthracene	310		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Chrysene	380		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Benzo[b]fluoranthene	370		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Benzo[k]fluoranthene	140		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Benzo[a]pyrene	280		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Indeno[1,2,3-cd]pyrene	150		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Dibenz(a,h)anthracene	53		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1
Benzo[g,h,i]perylene	160		11		ug/Kg	*	09/14/18 08:26	09/14/18 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		23 - 120	09/14/18 08:26	09/14/18 15:41	1
2-Fluorobiphenyl (Surr)	77		38 - 123	09/14/18 08:26	09/14/18 15:41	1
p-Terphenyl-d14	96		68 - 136	09/14/18 08:26	09/14/18 15:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	380		11		mg/Kg	*	09/17/18 10:20	09/17/18 16:54	1
Residual Range Organics (RRO) (C25-C36)	1700		26		mg/Kg	*	09/17/18 10:20	09/17/18 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150	09/17/18 10:20	09/17/18 16:54	1
n-Triacontane-d62	108		50 - 150	09/17/18 10:20	09/17/18 16:54	1

Client Sample ID: EX-13-W (12-13)

Lab Sample ID: 590-9371-7

Date Collected: 09/13/18 09:20

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Acenaphthylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Acenaphthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Fluorene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Phenanthrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1
Chrysene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 16:06	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-13-W (12-13)

Lab Sample ID: 590-9371-7

Date Collected: 09/13/18 09:20

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:06	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:06	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:06	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:06	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:06	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	71		23 - 120	09/14/18 08:26	09/14/18 16:06	1
2-Fluorobiphenyl (Surr)	83		38 - 123	09/14/18 08:26	09/14/18 16:06	1
p-Terphenyl-d14	102		68 - 136	09/14/18 08:26	09/14/18 16:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	09/17/18 10:20	09/17/18 17:15	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	09/17/18 10:20	09/17/18 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	98		50 - 150	09/17/18 10:20	09/17/18 17:15	1
n-Triacontane-d62	94		50 - 150	09/17/18 10:20	09/17/18 17:15	1

Client Sample ID: EX-14-E (12-13)

Lab Sample ID: 590-9371-8

Date Collected: 09/13/18 09:30

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Acenaphthylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Acenaphthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Fluorene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Phenanthrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Benzo[a]anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Chrysene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Benzo[b]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		23 - 120	09/14/18 08:26	09/14/18 16:31	1
2-Fluorobiphenyl (Surr)	80		38 - 123	09/14/18 08:26	09/14/18 16:31	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-14-E (12-13)

Lab Sample ID: 590-9371-8

Date Collected: 09/13/18 09:30

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.6

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14	99		68 - 136	09/14/18 08:26	09/14/18 16:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	09/17/18 10:20	09/17/18 17:36	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/17/18 10:20	09/17/18 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	96		50 - 150	09/17/18 10:20	09/17/18 17:36	1
<i>n</i> -Triacontane-d62	93		50 - 150	09/17/18 10:20	09/17/18 17:36	1

Client Sample ID: EX-15-E (12-13)

Lab Sample ID: 590-9371-9

Date Collected: 09/13/18 09:40

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 96.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Acenaphthylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Acenaphthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Fluorene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Phenanthrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Benzo[a]anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Chrysene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Benzo[b]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Nitrobenzene-d5</i>	83		23 - 120	09/14/18 08:26	09/14/18 16:56	1
<i>2-Fluorobiphenyl (Surr)</i>	85		38 - 123	09/14/18 08:26	09/14/18 16:56	1
<i>p</i> -Terphenyl-d14	99		68 - 136	09/14/18 08:26	09/14/18 16:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/17/18 10:20	09/17/18 17:56	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/17/18 10:20	09/17/18 17:56	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-15-E (12-13)

Date Collected: 09/13/18 09:40
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-9

Matrix: Solid
 Percent Solids: 96.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150	09/17/18 10:20	09/17/18 17:56	1
<i>n</i> -Triacontane-d62	94		50 - 150	09/17/18 10:20	09/17/18 17:56	1

Client Sample ID: EX-16-E (12-13)

Date Collected: 09/13/18 09:50
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-10

Matrix: Solid
 Percent Solids: 94.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Acenaphthylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Acenaphthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Fluorene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Phenanthrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Chrysene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Nitrobenzene-d5</i>	60		23 - 120	09/14/18 08:26	09/14/18 17:21	1
<i>2-Fluorobiphenyl (Surr)</i>	67		38 - 123	09/14/18 08:26	09/14/18 17:21	1
<i>p</i> -Terphenyl-d14	88		68 - 136	09/14/18 08:26	09/14/18 17:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	*	09/17/18 10:20	09/17/18 18:16	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/17/18 10:20	09/17/18 18:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	92		50 - 150	09/17/18 10:20	09/17/18 18:16	1
<i>n</i> -Triacontane-d62	87		50 - 150	09/17/18 10:20	09/17/18 18:16	1

Client Sample ID: EX-17-E (12-13)

Date Collected: 09/13/18 10:00
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-11

Matrix: Solid
 Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 17:46	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/14/18 08:26	09/14/18 17:46	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-17-E (12-13)

Lab Sample ID: 590-9371-11

Date Collected: 09/13/18 10:00

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Acenaphthylene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Acenaphthene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Fluorene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Phenanthrene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Anthracene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Fluoranthene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Pyrene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Benzo[a]anthracene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Chrysene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Benzo[b]fluoranthene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Benzo[k]fluoranthene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Benzo[a]pyrene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	☼	09/14/18 08:26	09/14/18 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		23 - 120	09/14/18 08:26	09/14/18 17:46	1
2-Fluorobiphenyl (Surr)	79		38 - 123	09/14/18 08:26	09/14/18 17:46	1
p-Terphenyl-d14	97		68 - 136	09/14/18 08:26	09/14/18 17:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/17/18 10:20	09/17/18 18:36	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/17/18 10:20	09/17/18 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150	09/17/18 10:20	09/17/18 18:36	1
n-Triacontane-d62	99		50 - 150	09/17/18 10:20	09/17/18 18:36	1

Client Sample ID: EX-18-E (8-9)

Lab Sample ID: 590-9371-12

Date Collected: 09/13/18 10:20

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 95.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Acenaphthylene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Acenaphthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Fluorene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Phenanthrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Fluoranthene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Pyrene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Benzo[a]anthracene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1
Chrysene	ND		10		ug/Kg	☼	09/14/18 08:26	09/14/18 18:11	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-18-E (8-9)

Lab Sample ID: 590-9371-12

Date Collected: 09/13/18 10:20

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 95.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:11	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:11	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:11	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:11	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:11	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	77		23 - 120	09/14/18 08:26	09/14/18 18:11	1
2-Fluorobiphenyl (Surr)	84		38 - 123	09/14/18 08:26	09/14/18 18:11	1
p-Terphenyl-d14	91		68 - 136	09/14/18 08:26	09/14/18 18:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	*	09/17/18 10:20	09/17/18 18:56	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/17/18 10:20	09/17/18 18:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	09/17/18 10:20	09/17/18 18:56	1
n-Triacontane-d62	91		50 - 150	09/17/18 10:20	09/17/18 18:56	1

Client Sample ID: EX-19-E (8-9)

Lab Sample ID: 590-9371-13

Date Collected: 09/13/18 10:30

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Acenaphthylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Acenaphthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Fluorene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Phenanthrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Chrysene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/14/18 08:26	09/14/18 18:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		23 - 120	09/14/18 08:26	09/14/18 18:35	1
2-Fluorobiphenyl (Surr)	87		38 - 123	09/14/18 08:26	09/14/18 18:35	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-19-E (8-9)

Date Collected: 09/13/18 10:30

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-13

Matrix: Solid

Percent Solids: 93.5

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>p-Terphenyl-d14</i>	99		68 - 136	09/14/18 08:26	09/14/18 18:35	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/17/18 10:20	09/17/18 19:17	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/17/18 10:20	09/17/18 19:17	1

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>o-Terphenyl</i>	98		50 - 150	09/17/18 10:20	09/17/18 19:17	1
<i>n-Triacontane-d62</i>	93		50 - 150	09/17/18 10:20	09/17/18 19:17	1

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

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

Lab Sample ID: MB 590-18850/1-A
 Matrix: Solid
 Analysis Batch: 18855

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18850

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
2-Methylnaphthalene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
1-Methylnaphthalene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Acenaphthylene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Acenaphthene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Fluorene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Phenanthrene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Anthracene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Fluoranthene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Pyrene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Benzo[a]anthracene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Chrysene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Benzo[b]fluoranthene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Benzo[k]fluoranthene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Benzo[a]pyrene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Dibenz(a,h)anthracene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1
Benzo[g,h,i]perylene	ND		10		ug/Kg		09/14/18 08:26	09/14/18 11:57	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	80		23 - 120	09/14/18 08:26	09/14/18 11:57	1
2-Fluorobiphenyl (Surr)	88		38 - 123	09/14/18 08:26	09/14/18 11:57	1
p-Terphenyl-d14	98		68 - 136	09/14/18 08:26	09/14/18 11:57	1

Lab Sample ID: LCS 590-18850/2-A
 Matrix: Solid
 Analysis Batch: 18855

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	267	222		ug/Kg		83	41 - 121
2-Methylnaphthalene	267	237		ug/Kg		89	39 - 132
1-Methylnaphthalene	267	258		ug/Kg		97	46 - 131
Acenaphthylene	267	257		ug/Kg		96	56 - 123
Acenaphthene	267	248		ug/Kg		93	43 - 140
Fluorene	267	253		ug/Kg		95	54 - 131
Phenanthrene	267	261		ug/Kg		98	55 - 141
Anthracene	267	305		ug/Kg		114	60 - 129
Fluoranthene	267	282		ug/Kg		106	63 - 141
Pyrene	267	267		ug/Kg		100	62 - 139
Benzo[a]anthracene	267	291		ug/Kg		109	61 - 136
Chrysene	267	284		ug/Kg		106	57 - 144
Benzo[b]fluoranthene	267	284		ug/Kg		107	66 - 141
Benzo[k]fluoranthene	267	285		ug/Kg		107	63 - 150
Benzo[a]pyrene	267	290		ug/Kg		109	60 - 133
Indeno[1,2,3-cd]pyrene	267	298		ug/Kg		112	55 - 142
Dibenz(a,h)anthracene	267	299		ug/Kg		112	60 - 150
Benzo[g,h,i]perylene	267	304		ug/Kg		114	58 - 147

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

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

Lab Sample ID: LCS 590-18850/2-A
 Matrix: Solid
 Analysis Batch: 18855

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18850

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	85		23 - 120
2-Fluorobiphenyl (Surr)	89		38 - 123
p-Terphenyl-d14	97		68 - 136

Lab Sample ID: 590-9371-1 MS
 Matrix: Solid
 Analysis Batch: 18855

Client Sample ID: EX-7-E (12-13)
 Prep Type: Total/NA
 Prep Batch: 18850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Naphthalene	ND		291	199		ug/Kg	*	68	41 - 121
2-Methylnaphthalene	ND		291	251		ug/Kg	*	86	39 - 132
1-Methylnaphthalene	ND		291	280		ug/Kg	*	96	46 - 131
Acenaphthylene	ND		291	301		ug/Kg	*	104	56 - 123
Acenaphthene	ND		291	315		ug/Kg	*	106	43 - 140
Fluorene	ND		291	301		ug/Kg	*	102	54 - 131
Phenanthrene	22		291	317		ug/Kg	*	101	55 - 141
Anthracene	ND		291	353		ug/Kg	*	119	60 - 129
Fluoranthene	24		291	349		ug/Kg	*	112	63 - 141
Pyrene	20		291	344		ug/Kg	*	111	62 - 139
Benzo[a]anthracene	ND		291	341		ug/Kg	*	114	61 - 136
Chrysene	11		291	330		ug/Kg	*	110	57 - 144
Benzo[b]fluoranthene	11		291	390		ug/Kg	*	130	66 - 141
Benzo[k]fluoranthene	ND		291	389		ug/Kg	*	132	63 - 150
Benzo[a]pyrene	ND		291	341		ug/Kg	*	114	60 - 133
Indeno[1,2,3-cd]pyrene	ND		291	372		ug/Kg	*	126	55 - 142
Dibenz(a,h)anthracene	ND		291	392		ug/Kg	*	135	60 - 150
Benzo[g,h,i]perylene	ND		291	390		ug/Kg	*	132	58 - 147

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	84		23 - 120
2-Fluorobiphenyl (Surr)	94		38 - 123
p-Terphenyl-d14	99		68 - 136

Lab Sample ID: 590-9371-1 MSD
 Matrix: Solid
 Analysis Batch: 18855

Client Sample ID: EX-7-E (12-13)
 Prep Type: Total/NA
 Prep Batch: 18850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	Limits	RPD	
				Result	Qualifier					RPD	Limit
Naphthalene	ND		296	252		ug/Kg	*	85	41 - 121	23	35
2-Methylnaphthalene	ND		296	266		ug/Kg	*	90	39 - 132	6	35
1-Methylnaphthalene	ND		296	294		ug/Kg	*	99	46 - 131	5	35
Acenaphthylene	ND		296	276		ug/Kg	*	93	56 - 123	9	35
Acenaphthene	ND		296	279		ug/Kg	*	92	43 - 140	12	35
Fluorene	ND		296	277		ug/Kg	*	92	54 - 131	8	35
Phenanthrene	22		296	302		ug/Kg	*	94	55 - 141	5	35
Anthracene	ND		296	343		ug/Kg	*	113	60 - 129	3	35
Fluoranthene	24		296	328		ug/Kg	*	103	63 - 141	6	35
Pyrene	20		296	304		ug/Kg	*	96	62 - 139	12	35

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

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

Lab Sample ID: 590-9371-1 MSD
 Matrix: Solid
 Analysis Batch: 18855

Client Sample ID: EX-7-E (12-13)
 Prep Type: Total/NA
 Prep Batch: 18850

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzo[a]anthracene	ND		296	319		ug/Kg	*	104	61 - 136	7	35
Chrysene	11		296	327		ug/Kg	*	107	57 - 144	1	35
Benzo[b]fluoranthene	11		296	350		ug/Kg	*	115	66 - 141	11	35
Benzo[k]fluoranthene	ND		296	357		ug/Kg	*	119	63 - 150	9	35
Benzo[a]pyrene	ND		296	323		ug/Kg	*	106	60 - 133	5	35
Indeno[1,2,3-cd]pyrene	ND		296	349		ug/Kg	*	116	55 - 142	7	35
Dibenz(a,h)anthracene	ND		296	366		ug/Kg	*	123	60 - 150	7	35
Benzo[g,h,i]perylene	ND		296	370		ug/Kg	*	123	58 - 147	5	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	78		23 - 120
2-Fluorobiphenyl (Surr)	81		38 - 123
p-Terphenyl-d14	95		68 - 136

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

Lab Sample ID: MB 590-18883/1-A
 Matrix: Solid
 Analysis Batch: 18884

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18883

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		09/17/18 10:20	09/17/18 12:23	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		09/17/18 10:20	09/17/18 12:23	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
o-Terphenyl	93		50 - 150	09/17/18 10:20	09/17/18 12:23	1
n-Triacontane-d62	93		50 - 150	09/17/18 10:20	09/17/18 12:23	1

Lab Sample ID: LCS 590-18883/2-A
 Matrix: Solid
 Analysis Batch: 18884

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18883

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Diesel Range Organics (DRO) (C10-C25)	66.7	59.0		mg/Kg		89	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	69.7		mg/Kg		105	50 - 150

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
o-Terphenyl	97		50 - 150
n-Triacontane-d62	99		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-7-E (12-13)

Date Collected: 09/13/18 08:40
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-7-E (12-13)

Date Collected: 09/13/18 08:40
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-1

Matrix: Solid

Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.29 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 13:37	NMI	TAL SPK
Total/NA	Prep	3550C			15.54 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 14:49	NMI	TAL SPK

Client Sample ID: EX-8-S (12-13)

Date Collected: 09/13/18 08:50
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-8-S (12-13)

Date Collected: 09/13/18 08:50
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-2

Matrix: Solid

Percent Solids: 78.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.17 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 14:02	NMI	TAL SPK
Total/NA	Prep	3550C			15.39 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 15:10	NMI	TAL SPK

Client Sample ID: EX-9-W (12-13)

Date Collected: 09/13/18 08:55
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-9-W (12-13)

Date Collected: 09/13/18 08:55
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-3

Matrix: Solid

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.98 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-9-W (12-13)

Date Collected: 09/13/18 08:55
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-3

Matrix: Solid
 Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 14:27	NMI	TAL SPK
Total/NA	Prep	3550C			15.61 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 15:31	NMI	TAL SPK

Client Sample ID: EX-10-W (12-13)

Date Collected: 09/13/18 09:00
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-10-W (12-13)

Date Collected: 09/13/18 09:00
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-4

Matrix: Solid
 Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.21 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 14:52	NMI	TAL SPK
Total/NA	Prep	3550C			15.68 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 16:13	NMI	TAL SPK

Client Sample ID: EX-11-W (12-13)

Date Collected: 09/13/18 09:05
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-11-W (12-13)

Date Collected: 09/13/18 09:05
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-5

Matrix: Solid
 Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.76 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 15:16	NMI	TAL SPK
Total/NA	Prep	3550C			15.18 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 16:34	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-12-W (12-13)

Lab Sample ID: 590-9371-6

Date Collected: 09/13/18 09:10

Matrix: Solid

Date Received: 09/13/18 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-12-W (12-13)

Lab Sample ID: 590-9371-6

Date Collected: 09/13/18 09:10

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.17 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 15:41	NMI	TAL SPK
Total/NA	Prep	3550C			15.32 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 16:54	NMI	TAL SPK

Client Sample ID: EX-13-W (12-13)

Lab Sample ID: 590-9371-7

Date Collected: 09/13/18 09:20

Matrix: Solid

Date Received: 09/13/18 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-13-W (12-13)

Lab Sample ID: 590-9371-7

Date Collected: 09/13/18 09:20

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.64 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 16:06	NMI	TAL SPK
Total/NA	Prep	3550C			15.09 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 17:15	NMI	TAL SPK

Client Sample ID: EX-14-E (12-13)

Lab Sample ID: 590-9371-8

Date Collected: 09/13/18 09:30

Matrix: Solid

Date Received: 09/13/18 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-14-E (12-13)

Lab Sample ID: 590-9371-8

Date Collected: 09/13/18 09:30

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.98 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-14-E (12-13)

Date Collected: 09/13/18 09:30
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-8

Matrix: Solid
 Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 16:31	NMI	TAL SPK
Total/NA	Prep	3550C			15.19 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 17:36	NMI	TAL SPK

Client Sample ID: EX-15-E (12-13)

Date Collected: 09/13/18 09:40
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-15-E (12-13)

Date Collected: 09/13/18 09:40
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-9

Matrix: Solid
 Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.47 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 16:56	NMI	TAL SPK
Total/NA	Prep	3550C			15.04 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 17:56	NMI	TAL SPK

Client Sample ID: EX-16-E (12-13)

Date Collected: 09/13/18 09:50
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-16-E (12-13)

Date Collected: 09/13/18 09:50
 Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-10

Matrix: Solid
 Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.18 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 17:21	NMI	TAL SPK
Total/NA	Prep	3550C			15.23 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 18:16	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-17-E (12-13)

Date Collected: 09/13/18 10:00

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-17-E (12-13)

Date Collected: 09/13/18 10:00

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-11

Matrix: Solid

Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.07 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 17:46	NMI	TAL SPK
Total/NA	Prep	3550C			15.74 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 18:36	NMI	TAL SPK

Client Sample ID: EX-18-E (8-9)

Date Collected: 09/13/18 10:20

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-18-E (8-9)

Date Collected: 09/13/18 10:20

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-12

Matrix: Solid

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.67 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 18:11	NMI	TAL SPK
Total/NA	Prep	3550C			15.10 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 18:56	NMI	TAL SPK

Client Sample ID: EX-19-E (8-9)

Date Collected: 09/13/18 10:30

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18851	09/14/18 08:39	MO	TAL SPK

Client Sample ID: EX-19-E (8-9)

Date Collected: 09/13/18 10:30

Date Received: 09/13/18 13:00

Lab Sample ID: 590-9371-13

Matrix: Solid

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.57 g	2 mL	18850	09/14/18 08:26	MO	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Client Sample ID: EX-19-E (8-9)

Lab Sample ID: 590-9371-13

Date Collected: 09/13/18 10:30

Matrix: Solid

Date Received: 09/13/18 13:00

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18855	09/14/18 18:35	NMI	TAL SPK
Total/NA	Prep	3550C			15.21 g	5 mL	18883	09/17/18 10:20	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18884	09/17/18 19:17	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

Laboratory: TestAmerica Spokane

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

<u>Authority</u>	<u>Program</u>	<u>EPA Region</u>	<u>Identification Number</u>	<u>Expiration Date</u>
Washington	State Program	10	C569	01-06-19

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.

<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9371-1

<u>Method</u>	<u>Method Description</u>	<u>Protocol</u>	<u>Laboratory</u>
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
9405 SW Nimbus Ave., Beaverton, OR 97008-7145
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
503-906-9200 FAX 906-9210
907-563-9200 FAX 563-9210

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

CHAIN OF CUSTODY



590-937 Chain of Custody

Work Order #:

TURNAROUND REQUEST

in Business Days *

Organic & Inorganic Analyses						
10	7	5	4	X	2	1 <1
STP						
Petroleum Hydrocarbon Analyses						
5	4	X	2	1	<1	
STP						
OTHER Specify						

* Turnaround Requests less than standard may incur Rush Charges

CLIENT: Geo Engineers
REPORT TO: jml@geoengineers.com
ADDRESS: 523 E. Second Ave
Spokane, WA 99202
PHONE: 509-363-2125 FAX:

INVOICE TO:
P.O. NUMBER:

PROJECT NAME: Avish - Service Center
PROJECT NUMBER: 2522-079.01
SAMPLED BY: JML
PRESERVATIVE:
REQUESTED ANALYSES:

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PAHS	VIS	HEAVY METALS	DX																
Ex-7-E(12-13)	9/13/2018 0840	X	X																		
Ex-8-S(12-13)	0850	X	X																		
Ex-9-W(12-13)	0855	X	X																		
Ex-10-W(12-13)	0900	X	X																		
Ex-11-W(12-13)	0905	X	X																		
Ex-12-W(12-13)	0910	X	X																		
Ex-13-W(12-13)	0920	X	X																		
Ex-14-E(12-13)	0930	X	X																		
Ex-15-E(12-13)	0940	X	X																		
Ex-16-E(12-13)	0950	X	X																		

MATRIX (W, S, O)	# OF CONT	LOCATION/ COMMENTS	TA W/O ID
S	2	3 day TAT	

RELEASED BY: Josh Dea FIRM: GEI DATE: 9/13/2018 TIME: 11:30
RELEASED BY: Matt Peterson FIRM: GEI DATE: 9-13-18 TIME: 13:02

RECEIVED BY: Matt Peterson FIRM: GEI DATE: 9-13-18 TIME: 13:00
RECEIVED BY: Sheela Khaty FIRM: JADPO DATE: 9/13/18 TIME: 1300

TEMP: 7.89 PAGE 1 OF 2
+PC004 (000) (0714)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

9/18/2018

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>Geoflyer</u>		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses STD. <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> Petroleum Hydrocarbon Analyses STD. <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> OTHER Specify: _____ * Turnaround Requests less than standard may incur Rush Charges							
REPORT TO: <u>Jake @ geoflyers.com</u>		P.O. NUMBER:									
ADDRESS: <u>523 E. Second Ave Spokane, WA 99202</u>											
PHONE: <u>509 363-3125</u> FAX:											
PROJECT NAME: <u>Avista Service Center</u>		PRESERVATIVE:									
PROJECT NUMBER: <u>2522-079-01</u>											
SAMPLED BY: <u>JML</u>		REQUESTED ANALYSES:									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PAHs	3705M	WUTPH-DX				MATRIX (W, S, O)	# OF CONT	LOCATION/ COMMENTS	TA WGT ID
<u>Ex-17-E(12-13)</u>	<u>9/13/2018 1000</u>	<u>X</u>	<u>X</u>					<u>S</u>	<u>2</u>	<u>3 day TAT</u>	
<u>Ex-18-E(8-9)</u>	<u>↓ 1020</u>	<u>X</u>	<u>X</u>					<u>↓</u>	<u>↓</u>		
<u>Ex-19-E(8-9)</u>	<u>↓ 1030</u>	<u>X</u>	<u>X</u>					<u>↓</u>	<u>↓</u>		
4											
5											
6											
7											
8											
9											
10											
RELEASED BY: <u>Alt</u>	DATE: <u>9/13/2018</u>	RECEIVED BY: <u>Matt Peterson</u>	DATE: <u>9-13-18</u>								
PRINT NAME: <u>Josh Co</u>	FIRM: <u>GET</u>	TIME: <u>1120</u>	PRINT NAME: <u>Matt Peterson</u>	FIRM: <u>GET</u>	TIME: <u>1302</u>						
RELEASED BY: <u>Matt Peterson</u>	DATE: <u>9-13-18</u>	RECEIVED BY: <u>Shelia K...</u>	DATE: <u>9/13/18</u>								
PRINT NAME: <u>Matt Peterson</u>	FIRM: <u>GET</u>	TIME: <u>1302</u>	PRINT NAME: <u>Shelia K...</u>	FIRM: <u>TA OPC</u>	TIME: <u>1300</u>						
ADDITIONAL REMARKS:				TEMP: <u>4°C</u>							

11004

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9371-1

Login Number: 9371
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is \neq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	Received same day of collection; chilling process has begun.
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

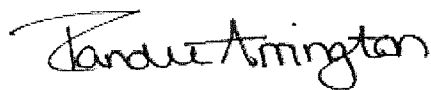
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9393-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



Authorized for release by:
9/24/2018 9:52:26 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

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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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Job ID: 590-9393-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 9/18/2018 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

GC/MS Semi 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.

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9393-1	EX-20-W (8-9)	Solid	09/17/18 11:50	09/18/18 09:45
590-9393-2	EX-21-W (8-9)	Solid	09/17/18 12:00	09/18/18 09:45
590-9393-3	EX-22-W (4-5)	Solid	09/17/18 12:05	09/18/18 09:45
590-9393-4	EX-23-N (3-4)	Solid	09/17/18 12:10	09/18/18 09:45
590-9393-5	EX-24-E (4-5)	Solid	09/17/18 12:15	09/18/18 09:45
590-9393-6	EX-25-E (8-9)	Solid	09/17/18 12:20	09/18/18 09:45
590-9393-7	EX-26-E (8-9)	Solid	09/17/18 12:25	09/18/18 09:45
590-9393-8	EX-27-B (9-10)	Solid	09/17/18 12:30	09/18/18 09:45
590-9393-9	EX-28-B (9-10)	Solid	09/17/18 12:35	09/18/18 09:45
590-9393-10	EX-29-B (4-5)	Solid	09/17/18 12:40	09/18/18 09:45

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-20-W (8-9)

Lab Sample ID: 590-9393-1

Date Collected: 09/17/18 11:50

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 93.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Acenaphthylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Acenaphthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Fluorene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Phenanthrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Chrysene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		23 - 120	09/20/18 10:18	09/20/18 14:34	1
2-Fluorobiphenyl (Surr)	88		38 - 123	09/20/18 10:18	09/20/18 14:34	1
p-Terphenyl-d14	99		68 - 136	09/20/18 10:18	09/20/18 14:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/19/18 12:50	09/19/18 19:00	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/19/18 12:50	09/19/18 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	09/19/18 12:50	09/19/18 19:00	1
n-Triacontane-d62	92		50 - 150	09/19/18 12:50	09/19/18 19:00	1

Client Sample ID: EX-21-W (8-9)

Lab Sample ID: 590-9393-2

Date Collected: 09/17/18 12:00

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Acenaphthylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Acenaphthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Fluorene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Phenanthrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-21-W (8-9)

Lab Sample ID: 590-9393-2

Date Collected: 09/17/18 12:00

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Chrysene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	83		23 - 120	09/20/18 10:18	09/20/18 14:59	1
2-Fluorobiphenyl (Surr)	86		38 - 123	09/20/18 10:18	09/20/18 14:59	1
p-Terphenyl-d14	103		68 - 136	09/20/18 10:18	09/20/18 14:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/19/18 12:50	09/19/18 19:20	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	*	09/19/18 12:50	09/19/18 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150	09/19/18 12:50	09/19/18 19:20	1
n-Triacontane-d62	83		50 - 150	09/19/18 12:50	09/19/18 19:20	1

Client Sample ID: EX-22-W (4-5)

Lab Sample ID: 590-9393-3

Date Collected: 09/17/18 12:05

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	23		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
2-Methylnaphthalene	16		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
1-Methylnaphthalene	14		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Acenaphthylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Acenaphthene	170		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Fluorene	75		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Phenanthrene	610		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Anthracene	190		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Fluoranthene	700		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Pyrene	620		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Benzo[a]anthracene	330		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Chrysene	360		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Benzo[b]fluoranthene	340		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Benzo[k]fluoranthene	150		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Benzo[a]pyrene	290		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Indeno[1,2,3-cd]pyrene	150		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Dibenz(a,h)anthracene	51		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1
Benzo[g,h,i]perylene	150		10		ug/Kg	*	09/20/18 10:18	09/20/18 15:24	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-22-W (4-5)

Lab Sample ID: 590-9393-3

Date Collected: 09/17/18 12:05

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	80		23 - 120	09/20/18 10:18	09/20/18 15:24	1
2-Fluorobiphenyl (Surr)	96		38 - 123	09/20/18 10:18	09/20/18 15:24	1
p-Terphenyl-d14	102		68 - 136	09/20/18 10:18	09/20/18 15:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	09/19/18 12:50	09/19/18 19:40	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	09/19/18 12:50	09/19/18 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150	09/19/18 12:50	09/19/18 19:40	1
n-Triacontane-d62	89		50 - 150	09/19/18 12:50	09/19/18 19:40	1

Client Sample ID: EX-23-N (3-4)

Lab Sample ID: 590-9393-4

Date Collected: 09/17/18 12:10

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 93.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Acenaphthylene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Acenaphthene	21		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Fluorene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Phenanthrene	68		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Anthracene	17		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Fluoranthene	94		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Pyrene	88		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Benzo[a]anthracene	42		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Chrysene	48		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Benzo[b]fluoranthene	46		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Benzo[k]fluoranthene	20		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Benzo[a]pyrene	40		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Indeno[1,2,3-cd]pyrene	20		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1
Benzo[g,h,i]perylene	22		10		ug/Kg	☼	09/20/18 10:18	09/20/18 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	72		23 - 120	09/20/18 10:18	09/20/18 15:49	1
2-Fluorobiphenyl (Surr)	83		38 - 123	09/20/18 10:18	09/20/18 15:49	1
p-Terphenyl-d14	99		68 - 136	09/20/18 10:18	09/20/18 15:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/19/18 12:50	09/19/18 20:00	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/19/18 12:50	09/19/18 20:00	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-23-N (3-4)

Date Collected: 09/17/18 12:10

Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-4

Matrix: Solid

Percent Solids: 93.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	85		50 - 150	09/19/18 12:50	09/19/18 20:00	1
<i>n</i> -Triacontane-d62	84		50 - 150	09/19/18 12:50	09/19/18 20:00	1

Client Sample ID: EX-24-E (4-5)

Date Collected: 09/17/18 12:15

Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-5

Matrix: Solid

Percent Solids: 91.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Acenaphthylene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Acenaphthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Fluorene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Phenanthrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Fluoranthene	11		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Chrysene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Benzo[b]fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Nitrobenzene-d5</i>	83		23 - 120	09/20/18 10:18	09/20/18 16:14	1
<i>2-Fluorobiphenyl (Surr)</i>	100		38 - 123	09/20/18 10:18	09/20/18 16:14	1
<i>p</i> -Terphenyl-d14	105		68 - 136	09/20/18 10:18	09/20/18 16:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/19/18 12:50	09/19/18 20:20	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	*	09/19/18 12:50	09/19/18 20:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150	09/19/18 12:50	09/19/18 20:20	1
<i>n</i> -Triacontane-d62	94		50 - 150	09/19/18 12:50	09/19/18 20:20	1

Client Sample ID: EX-25-E (8-9)

Date Collected: 09/17/18 12:20

Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-6

Matrix: Solid

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-25-E (8-9)

Lab Sample ID: 590-9393-6

Date Collected: 09/17/18 12:20

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Acenaphthylene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Acenaphthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Fluorene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Phenanthrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Chrysene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Benzo[b]fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		23 - 120	09/20/18 10:18	09/20/18 16:39	1
2-Fluorobiphenyl (Surr)	86		38 - 123	09/20/18 10:18	09/20/18 16:39	1
p-Terphenyl-d14	94		68 - 136	09/20/18 10:18	09/20/18 16:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/19/18 12:50	09/19/18 20:40	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	*	09/19/18 12:50	09/19/18 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150	09/19/18 12:50	09/19/18 20:40	1
n-Triacontane-d62	85		50 - 150	09/19/18 12:50	09/19/18 20:40	1

Client Sample ID: EX-26-E (8-9)

Lab Sample ID: 590-9393-7

Date Collected: 09/17/18 12:25

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 90.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
2-Methylnaphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
1-Methylnaphthalene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Acenaphthylene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Acenaphthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Fluorene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Phenanthrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Benzo[a]anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Chrysene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-26-E (8-9)

Lab Sample ID: 590-9393-7

Date Collected: 09/17/18 12:25

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 90.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Benzo[k]fluoranthene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Benzo[a]pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Indeno[1,2,3-cd]pyrene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Dibenz(a,h)anthracene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1
Benzo[g,h,i]perylene	ND		11		ug/Kg	*	09/20/18 10:18	09/20/18 17:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		23 - 120	09/20/18 10:18	09/20/18 17:04	1
2-Fluorobiphenyl (Surr)	86		38 - 123	09/20/18 10:18	09/20/18 17:04	1
p-Terphenyl-d14	94		68 - 136	09/20/18 10:18	09/20/18 17:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	*	09/19/18 12:50	09/19/18 21:00	1
Residual Range Organics (RRO) (C25-C36)	41		27		mg/Kg	*	09/19/18 12:50	09/19/18 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150	09/19/18 12:50	09/19/18 21:00	1
n-Triacontane-d62	91		50 - 150	09/19/18 12:50	09/19/18 21:00	1

Client Sample ID: EX-27-B (9-10)

Lab Sample ID: 590-9393-8

Date Collected: 09/17/18 12:30

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 94.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Acenaphthylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Acenaphthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Fluorene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Phenanthrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Chrysene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		23 - 120	09/20/18 10:18	09/20/18 17:28	1
2-Fluorobiphenyl (Surr)	83		38 - 123	09/20/18 10:18	09/20/18 17:28	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-27-B (9-10)

Date Collected: 09/17/18 12:30

Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-8

Matrix: Solid

Percent Solids: 94.3

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14	96		68 - 136	09/20/18 10:18	09/20/18 17:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/19/18 12:50	09/19/18 21:40	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/19/18 12:50	09/19/18 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150	09/19/18 12:50	09/19/18 21:40	1
<i>n</i> -Triacontane-d62	92		50 - 150	09/19/18 12:50	09/19/18 21:40	1

Client Sample ID: EX-28-B (9-10)

Date Collected: 09/17/18 12:35

Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-9

Matrix: Solid

Percent Solids: 94.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
2-Methylnaphthalene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
1-Methylnaphthalene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Acenaphthylene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Acenaphthene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Fluorene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Phenanthrene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Anthracene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Fluoranthene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Pyrene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Benzo[a]anthracene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Chrysene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Benzo[b]fluoranthene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Benzo[k]fluoranthene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Benzo[a]pyrene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	☼	09/20/18 10:18	09/20/18 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	82		23 - 120	09/20/18 10:18	09/20/18 17:53	1
2-Fluorobiphenyl (Surr)	90		38 - 123	09/20/18 10:18	09/20/18 17:53	1
<i>p</i> -Terphenyl-d14	97		68 - 136	09/20/18 10:18	09/20/18 17:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	09/19/18 12:50	09/19/18 22:00	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	09/19/18 12:50	09/19/18 22:00	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-28-B (9-10)

Date Collected: 09/17/18 12:35
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-9

Matrix: Solid
 Percent Solids: 94.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	96		50 - 150	09/19/18 12:50	09/19/18 22:00	1
<i>n</i> -Triacontane-d62	93		50 - 150	09/19/18 12:50	09/19/18 22:00	1

Client Sample ID: EX-29-B (4-5)

Date Collected: 09/17/18 12:40
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-10

Matrix: Solid
 Percent Solids: 94.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
2-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
1-Methylnaphthalene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Acenaphthylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Acenaphthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Fluorene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Phenanthrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Benzo[a]anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Chrysene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Benzo[b]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Benzo[k]fluoranthene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Benzo[a]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Dibenz(a,h)anthracene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1
Benzo[g,h,i]perylene	ND		10		ug/Kg	*	09/20/18 10:18	09/20/18 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Nitrobenzene-d5</i>	80		23 - 120	09/20/18 10:18	09/20/18 18:18	1
<i>2-Fluorobiphenyl (Surr)</i>	93		38 - 123	09/20/18 10:18	09/20/18 18:18	1
<i>p</i> -Terphenyl-d14	102		68 - 136	09/20/18 10:18	09/20/18 18:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	*	09/19/18 12:50	09/19/18 22:20	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	*	09/19/18 12:50	09/19/18 22:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	93		50 - 150	09/19/18 12:50	09/19/18 22:20	1
<i>n</i> -Triacontane-d62	92		50 - 150	09/19/18 12:50	09/19/18 22:20	1

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

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

Lab Sample ID: MB 590-18962/1-A
Matrix: Solid
Analysis Batch: 18964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18962

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
2-Methylnaphthalene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
1-Methylnaphthalene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Acenaphthylene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Acenaphthene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Fluorene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Phenanthrene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Anthracene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Fluoranthene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Pyrene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Benzo[a]anthracene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Chrysene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Benzo[b]fluoranthene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Benzo[k]fluoranthene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Benzo[a]pyrene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Dibenz(a,h)anthracene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1
Benzo[g,h,i]perylene	ND		10		ug/Kg		09/20/18 10:18	09/20/18 12:55	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	93		23 - 120	09/20/18 10:18	09/20/18 12:55	1
2-Fluorobiphenyl (Surr)	91		38 - 123	09/20/18 10:18	09/20/18 12:55	1
p-Terphenyl-d14	113		68 - 136	09/20/18 10:18	09/20/18 12:55	1

Lab Sample ID: LCS 590-18962/2-A
Matrix: Solid
Analysis Batch: 18964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	267	208		ug/Kg		78	41 - 121
2-Methylnaphthalene	267	203		ug/Kg		76	39 - 132
1-Methylnaphthalene	267	233		ug/Kg		87	46 - 131
Acenaphthylene	267	213		ug/Kg		80	56 - 123
Acenaphthene	267	226		ug/Kg		85	43 - 140
Fluorene	267	201		ug/Kg		75	54 - 131
Phenanthrene	267	222		ug/Kg		83	55 - 141
Anthracene	267	259		ug/Kg		97	60 - 129
Fluoranthene	267	235		ug/Kg		88	63 - 141
Pyrene	267	221		ug/Kg		83	62 - 139
Benzo[a]anthracene	267	221		ug/Kg		83	61 - 136
Chrysene	267	229		ug/Kg		86	57 - 144
Benzo[b]fluoranthene	267	218		ug/Kg		82	66 - 141
Benzo[k]fluoranthene	267	225		ug/Kg		84	63 - 150
Benzo[a]pyrene	267	218		ug/Kg		82	60 - 133
Indeno[1,2,3-cd]pyrene	267	222		ug/Kg		83	55 - 142
Dibenz(a,h)anthracene	267	222		ug/Kg		83	60 - 150
Benzo[g,h,i]perylene	267	221		ug/Kg		83	58 - 147

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

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

Lab Sample ID: LCS 590-18962/2-A
 Matrix: Solid
 Analysis Batch: 18964

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18962

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	87		23 - 120
2-Fluorobiphenyl (Surr)	93		38 - 123
p-Terphenyl-d14	107		68 - 136

Lab Sample ID: 590-9393-1 MS
 Matrix: Solid
 Analysis Batch: 18964

Client Sample ID: EX-20-W (8-9)
 Prep Type: Total/NA
 Prep Batch: 18962

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Naphthalene	ND		284	184		ug/Kg	*	65	41 - 121
2-Methylnaphthalene	ND		284	194		ug/Kg	*	68	39 - 132
1-Methylnaphthalene	ND		284	207		ug/Kg	*	73	46 - 131
Acenaphthylene	ND		284	210		ug/Kg	*	74	56 - 123
Acenaphthene	ND		284	207		ug/Kg	*	73	43 - 140
Fluorene	ND		284	194		ug/Kg	*	68	54 - 131
Phenanthrene	ND		284	210		ug/Kg	*	74	55 - 141
Anthracene	ND		284	243		ug/Kg	*	86	60 - 129
Fluoranthene	ND		284	227		ug/Kg	*	80	63 - 141
Pyrene	ND		284	216		ug/Kg	*	76	62 - 139
Benzo[a]anthracene	ND		284	217		ug/Kg	*	76	61 - 136
Chrysene	ND		284	221		ug/Kg	*	78	57 - 144
Benzo[b]fluoranthene	ND		284	218		ug/Kg	*	77	66 - 141
Benzo[k]fluoranthene	ND		284	234		ug/Kg	*	83	63 - 150
Benzo[a]pyrene	ND		284	224		ug/Kg	*	79	60 - 133
Indeno[1,2,3-cd]pyrene	ND		284	220		ug/Kg	*	77	55 - 142
Dibenz(a,h)anthracene	ND		284	222		ug/Kg	*	78	60 - 150
Benzo[g,h,i]perylene	ND		284	224		ug/Kg	*	79	58 - 147

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	82		23 - 120
2-Fluorobiphenyl (Surr)	86		38 - 123
p-Terphenyl-d14	105		68 - 136

Lab Sample ID: 590-9393-1 MSD
 Matrix: Solid
 Analysis Batch: 18964

Client Sample ID: EX-20-W (8-9)
 Prep Type: Total/NA
 Prep Batch: 18962

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	Limits	RPD	
				Result	Qualifier					RPD	Limit
Naphthalene	ND		281	185		ug/Kg	*	66	41 - 121	0	35
2-Methylnaphthalene	ND		281	209		ug/Kg	*	74	39 - 132	8	35
1-Methylnaphthalene	ND		281	224		ug/Kg	*	80	46 - 131	8	35
Acenaphthylene	ND		281	221		ug/Kg	*	79	56 - 123	5	35
Acenaphthene	ND		281	246		ug/Kg	*	88	43 - 140	17	35
Fluorene	ND		281	197		ug/Kg	*	70	54 - 131	2	35
Phenanthrene	ND		281	219		ug/Kg	*	78	55 - 141	4	35
Anthracene	ND		281	286		ug/Kg	*	102	60 - 129	16	35
Fluoranthene	ND		281	236		ug/Kg	*	84	63 - 141	4	35
Pyrene	ND		281	226		ug/Kg	*	80	62 - 139	5	35

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

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

Lab Sample ID: 590-9393-1 MSD
 Matrix: Solid
 Analysis Batch: 18964

Client Sample ID: EX-20-W (8-9)
 Prep Type: Total/NA
 Prep Batch: 18962

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzo[a]anthracene	ND		281	237		ug/Kg	*	84	61 - 136	9	35
Chrysene	ND		281	235		ug/Kg	*	84	57 - 144	6	35
Benzo[b]fluoranthene	ND		281	229		ug/Kg	*	81	66 - 141	5	35
Benzo[k]fluoranthene	ND		281	237		ug/Kg	*	84	63 - 150	1	35
Benzo[a]pyrene	ND		281	228		ug/Kg	*	81	60 - 133	2	35
Indeno[1,2,3-cd]pyrene	ND		281	233		ug/Kg	*	83	55 - 142	6	35
Dibenz(a,h)anthracene	ND		281	234		ug/Kg	*	83	60 - 150	5	35
Benzo[g,h,i]perylene	ND		281	239		ug/Kg	*	85	58 - 147	7	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	91		23 - 120
2-Fluorobiphenyl (Surr)	100		38 - 123
p-Terphenyl-d14	104		68 - 136

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

Lab Sample ID: MB 590-18951/1-A
 Matrix: Solid
 Analysis Batch: 18934

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 18951

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		09/19/18 12:50	09/19/18 14:16	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		09/19/18 12:50	09/19/18 14:16	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
o-Terphenyl	92		50 - 150	09/19/18 12:50	09/19/18 14:16	1
n-Triacontane-d62	90		50 - 150	09/19/18 12:50	09/19/18 14:16	1

Lab Sample ID: LCS 590-18951/2-A
 Matrix: Solid
 Analysis Batch: 18934

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 18951

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
		Added	Result				
Diesel Range Organics (DRO) (C10-C25)	66.7	54.2		mg/Kg		81	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	61.9		mg/Kg		93	50 - 150

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
o-Terphenyl	93		50 - 150
n-Triacontane-d62	89		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-20-W (8-9)

Lab Sample ID: 590-9393-1

Date Collected: 09/17/18 11:50

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-20-W (8-9)

Lab Sample ID: 590-9393-1

Date Collected: 09/17/18 11:50

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.70 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 14:34	NMI	TAL SPK
Total/NA	Prep	3550C			15.22 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 19:00	NMI	TAL SPK

Client Sample ID: EX-21-W (8-9)

Lab Sample ID: 590-9393-2

Date Collected: 09/17/18 12:00

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-21-W (8-9)

Lab Sample ID: 590-9393-2

Date Collected: 09/17/18 12:00

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.48 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 14:59	NMI	TAL SPK
Total/NA	Prep	3550C			15.23 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 19:20	NMI	TAL SPK

Client Sample ID: EX-22-W (4-5)

Lab Sample ID: 590-9393-3

Date Collected: 09/17/18 12:05

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-22-W (4-5)

Lab Sample ID: 590-9393-3

Date Collected: 09/17/18 12:05

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.54 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-22-W (4-5)

Date Collected: 09/17/18 12:05
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-3

Matrix: Solid
 Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 15:24	NMI	TAL SPK
Total/NA	Prep	3550C			15.02 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 19:40	NMI	TAL SPK

Client Sample ID: EX-23-N (3-4)

Date Collected: 09/17/18 12:10
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-23-N (3-4)

Date Collected: 09/17/18 12:10
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-4

Matrix: Solid
 Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.90 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 15:49	NMI	TAL SPK
Total/NA	Prep	3550C			15.71 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 20:00	NMI	TAL SPK

Client Sample ID: EX-24-E (4-5)

Date Collected: 09/17/18 12:15
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-24-E (4-5)

Date Collected: 09/17/18 12:15
 Date Received: 09/18/18 09:45

Lab Sample ID: 590-9393-5

Matrix: Solid
 Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.51 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 16:14	NMI	TAL SPK
Total/NA	Prep	3550C			15.36 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 20:20	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-25-E (8-9)

Lab Sample ID: 590-9393-6

Date Collected: 09/17/18 12:20

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-25-E (8-9)

Lab Sample ID: 590-9393-6

Date Collected: 09/17/18 12:20

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.47 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 16:39	NMI	TAL SPK
Total/NA	Prep	3550C			15.28 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 20:40	NMI	TAL SPK

Client Sample ID: EX-26-E (8-9)

Lab Sample ID: 590-9393-7

Date Collected: 09/17/18 12:25

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-26-E (8-9)

Lab Sample ID: 590-9393-7

Date Collected: 09/17/18 12:25

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.44 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 17:04	NMI	TAL SPK
Total/NA	Prep	3550C			15.30 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 21:00	NMI	TAL SPK

Client Sample ID: EX-27-B (9-10)

Lab Sample ID: 590-9393-8

Date Collected: 09/17/18 12:30

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-27-B (9-10)

Lab Sample ID: 590-9393-8

Date Collected: 09/17/18 12:30

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.75 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Client Sample ID: EX-27-B (9-10)

Lab Sample ID: 590-9393-8

Date Collected: 09/17/18 12:30

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 17:28	NMI	TAL SPK
Total/NA	Prep	3550C			15.23 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 21:40	NMI	TAL SPK

Client Sample ID: EX-28-B (9-10)

Lab Sample ID: 590-9393-9

Date Collected: 09/17/18 12:35

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-28-B (9-10)

Lab Sample ID: 590-9393-9

Date Collected: 09/17/18 12:35

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.18 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 17:53	NMI	TAL SPK
Total/NA	Prep	3550C			15.32 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 22:00	NMI	TAL SPK

Client Sample ID: EX-29-B (4-5)

Lab Sample ID: 590-9393-10

Date Collected: 09/17/18 12:40

Matrix: Solid

Date Received: 09/18/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			18939	09/19/18 10:56	NMI	TAL SPK

Client Sample ID: EX-29-B (4-5)

Lab Sample ID: 590-9393-10

Date Collected: 09/17/18 12:40

Matrix: Solid

Date Received: 09/18/18 09:45

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.87 g	2 mL	18962	09/20/18 10:18	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			18964	09/20/18 18:18	NMI	TAL SPK
Total/NA	Prep	3550C			15.16 g	5 mL	18951	09/19/18 12:50	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			18934	09/19/18 22:20	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9393-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



590-9393 Chain of Custody

1st Ave., Spokane WA 99206-5302
 us Ave., Beaverton, OR 97008-7145
 te A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 863-9210

9/24/2018

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>GeoLoggers</u>		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses 10 7 <input checked="" type="checkbox"/> 4 3 2 1 <1 STD Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 3 2 1 <1 STD OTHER Specify * Turnaround Requests less than standard may incur Rush Charge				
REPORT TO: <u>intec@geologgers.com</u>		P.O. NUMBER:						
ADDRESS: <u>523 E Second Ave</u>		PRESERVATIVE						
PHONE: <u>509-363-3125</u> FAX:		REQUESTED ANALYSES						
PROJECT NAME: <u>Austin Service Center</u>		PAHs						
PROJECT NUMBER: <u>2522-079-01</u>		2270 SA						
SAMPLED BY: <u>JML</u>		MTPH						
		DX						
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PAHs	MTPH	DX	MATRIX (W, S, O)	# OF CONT	LOCATION/ COMMENTS	TA WO ID
Ex-20W(8-9)	9/17/2018 1150	X	X		S	2	5 day TAT	
Ex-21W(8-9)	1200	X	X					
Ex-22-W(4-5)	1205	X	X					
Ex-23 N(3-4)	1210	X	X					
Ex-24 E(4-5)	1215	X	X					
Ex-25-E(8-9)	1220	X	X					
Ex-26-E(8-7)	1225	X	X					
Ex-27-B(9-10)	1230	X	X					
Ex-28-B(9-10)	1235	X	X					
Ex-29-B(4-5)	1240	X	X					
RELEASED BY: <u>John Lee</u>	FIRM: <u>GEI</u>	DATE: <u>9/18/2018</u>	TIME: <u>0745</u>	RECEIVED BY: <u>Watt Suda</u>	FIRM: <u>TA-SPO</u>	DATE: <u>9/18/18</u>	TIME: <u>0745</u>	
PRINT NAME: <u>John Lee</u>				PRINT NAME: <u>Watt Suda</u>				
ADDITIONAL REMARKS:						TEMP: <u>39°C</u>		

(12004) TAT-10001014

Page 23 of 24

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9393-1

Login Number: 9393

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	N/A	Sample is solid
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

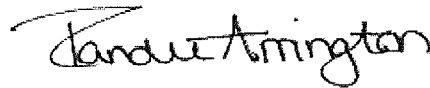
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9656-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



*Authorized for release by:
10/30/2018 3:52:47 PM*

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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www.testamericainc.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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Job ID: 590-9656-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 10/12/2018 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

GC/MS Semi VOA

Method 8270D: The following sample was originally run within the method holding time but due to re-analysis for result verification the sample was re-extracted and re-analyzed out of hold: DUP:101018.

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.

Organic Prep

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

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9656-1	MW-1:101018	Water	10/10/18 11:40	10/12/18 08:30
590-9656-2	MW-2:101018	Water	10/10/18 13:10	10/12/18 08:30
590-9656-3	MW-3:101018	Water	10/10/18 15:45	10/12/18 08:30
590-9656-4	MW-4:101018	Water	10/10/18 16:30	10/12/18 08:30
590-9656-5	MW-5A:101018	Water	10/10/18 14:50	10/12/18 08:30
590-9656-6	DUP:101018	Water	10/10/18 08:00	10/12/18 08:30

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-1:101018

Lab Sample ID: 590-9656-1

Date Collected: 10/10/18 11:40

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	72		45 - 126	10/15/18 12:57	10/15/18 15:58	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/15/18 12:57	10/15/18 15:58	1
p-Terphenyl-d14	83		51 - 121	10/15/18 12:57	10/15/18 15:58	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		20 - 120	10/25/18 14:20	10/26/18 11:29	1
DCB Decachlorobiphenyl (Surr)	92		36 - 138	10/25/18 14:20	10/26/18 11:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 17:07	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150	10/16/18 10:42	10/16/18 17:07	1
n-Triacontane-d62	95		50 - 150	10/16/18 10:42	10/16/18 17:07	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-2:101018

Lab Sample ID: 590-9656-2

Date Collected: 10/10/18 13:10

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		45 - 126	10/15/18 12:57	10/15/18 16:25	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/15/18 12:57	10/15/18 16:25	1
p-Terphenyl-d14	86		51 - 121	10/15/18 12:57	10/15/18 16:25	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		20 - 120	10/25/18 14:20	10/26/18 11:49	1
DCB Decachlorobiphenyl (Surr)	96		36 - 138	10/25/18 14:20	10/26/18 11:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 17:27	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 17:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	10/16/18 10:42	10/16/18 17:27	1
n-Triacontane-d62	92		50 - 150	10/16/18 10:42	10/16/18 17:27	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-3:101018

Lab Sample ID: 590-9656-3

Date Collected: 10/10/18 15:45

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		45 - 126	10/15/18 12:57	10/15/18 16:51	1
2-Fluorobiphenyl (Surr)	77		44 - 120	10/15/18 12:57	10/15/18 16:51	1
p-Terphenyl-d14	90		51 - 121	10/15/18 12:57	10/15/18 16:51	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		20 - 120	10/25/18 14:20	10/26/18 12:10	1
DCB Decachlorobiphenyl (Surr)	91		36 - 138	10/25/18 14:20	10/26/18 12:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23		mg/L		10/16/18 10:42	10/16/18 17:46	1
Residual Range Organics (RRO) (C25-C36)	ND		0.38		mg/L		10/16/18 10:42	10/16/18 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150	10/16/18 10:42	10/16/18 17:46	1
n-Triacontane-d62	95		50 - 150	10/16/18 10:42	10/16/18 17:46	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-4:101018

Lab Sample ID: 590-9656-4

Date Collected: 10/10/18 16:30

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		45 - 126	10/15/18 12:57	10/15/18 17:18	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/15/18 12:57	10/15/18 17:18	1
p-Terphenyl-d14	81		51 - 121	10/15/18 12:57	10/15/18 17:18	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		20 - 120	10/25/18 14:20	10/26/18 12:30	1
DCB Decachlorobiphenyl (Surr)	92		36 - 138	10/25/18 14:20	10/26/18 12:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23		mg/L		10/16/18 10:42	10/16/18 18:06	1
Residual Range Organics (RRO) (C25-C36)	ND		0.38		mg/L		10/16/18 10:42	10/16/18 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150	10/16/18 10:42	10/16/18 18:06	1
n-Triacontane-d62	92		50 - 150	10/16/18 10:42	10/16/18 18:06	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-5A:101018

Lab Sample ID: 590-9656-5

Date Collected: 10/10/18 14:50

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
2-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
1-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Acenaphthylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Acenaphthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Fluorene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Phenanthrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[a]anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Chrysene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[b]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[k]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[a]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	88		45 - 126	10/15/18 12:57	10/15/18 17:44	1
2-Fluorobiphenyl (Surr)	84		44 - 120	10/15/18 12:57	10/15/18 17:44	1
p-Terphenyl-d14	89		51 - 121	10/15/18 12:57	10/15/18 17:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		20 - 120	10/25/18 14:20	10/26/18 12:51	1
DCB Decachlorobiphenyl (Surr)	104		36 - 138	10/25/18 14:20	10/26/18 12:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 18:25	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	10/16/18 10:42	10/16/18 18:25	1
n-Triacontane-d62	90		50 - 150	10/16/18 10:42	10/16/18 18:25	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: DUP:101018

Lab Sample ID: 590-9656-6

Date Collected: 10/10/18 08:00

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
2-Methylnaphthalene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
1-Methylnaphthalene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Acenaphthylene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Acenaphthene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Fluorene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Phenanthrene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Anthracene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Fluoranthene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Pyrene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Benzo[a]anthracene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Chrysene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Benzo[b]fluoranthene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Benzo[k]fluoranthene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Benzo[a]pyrene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Indeno[1,2,3-cd]pyrene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Dibenz(a,h)anthracene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1
Benzo[g,h,i]perylene	ND	H	0.090		ug/L		10/28/18 14:37	10/28/18 20:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		45 - 126	10/28/18 14:37	10/28/18 20:34	1
2-Fluorobiphenyl (Surr)	68		44 - 120	10/28/18 14:37	10/28/18 20:34	1
p-Terphenyl-d14	72		51 - 121	10/28/18 14:37	10/28/18 20:34	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		20 - 120	10/25/18 14:20	10/26/18 13:11	1
DCB Decachlorobiphenyl (Surr)	94		36 - 138	10/25/18 14:20	10/26/18 13:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 18:45	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150	10/16/18 10:42	10/16/18 18:45	1
n-Triacontane-d62	92		50 - 150	10/16/18 10:42	10/16/18 18:45	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: MB 590-19408/1-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19408

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
2-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
1-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Acenaphthylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Acenaphthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Fluorene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Phenanthrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[a]anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Chrysene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[b]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[k]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[a]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	73		45 - 126	10/15/18 12:57	10/15/18 14:12	1
2-Fluorobiphenyl (Surr)	75		44 - 120	10/15/18 12:57	10/15/18 14:12	1
p-Terphenyl-d14	83		51 - 121	10/15/18 12:57	10/15/18 14:12	1

Lab Sample ID: LCS 590-19408/2-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2-Methylnaphthalene	1.60	1.20		ug/L		75	44 - 134
1-Methylnaphthalene	1.60	1.32		ug/L		82	56 - 123
Acenaphthylene	1.60	1.21		ug/L		76	57 - 134
Acenaphthene	1.60	1.21		ug/L		76	54 - 132
Fluorene	1.60	1.25		ug/L		78	59 - 141
Phenanthrene	1.60	1.24		ug/L		78	57 - 141
Anthracene	1.60	1.55		ug/L		97	60 - 136
Fluoranthene	1.60	1.40		ug/L		87	76 - 133
Pyrene	1.60	1.19		ug/L		74	59 - 145
Benzo[a]anthracene	1.60	1.41		ug/L		88	76 - 138
Chrysene	1.60	1.33		ug/L		83	69 - 138
Benzo[b]fluoranthene	1.60	1.42		ug/L		89	69 - 144
Benzo[k]fluoranthene	1.60	1.28		ug/L		80	67 - 141
Benzo[a]pyrene	1.60	1.41		ug/L		88	70 - 141
Indeno[1,2,3-cd]pyrene	1.60	1.32		ug/L		83	73 - 146
Dibenz(a,h)anthracene	1.60	1.32		ug/L		83	68 - 144
Benzo[g,h,i]perylene	1.60	1.33		ug/L		83	68 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: LCS 590-19408/2-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19408

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	81		45 - 126
2-Fluorobiphenyl (Surr)	83		44 - 120
p-Terphenyl-d14	92		51 - 121

Lab Sample ID: LCSD 590-19408/3-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19408

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	
								RPD	Limit
Naphthalene	1.60	1.15		ug/L		72	52 - 121	4	30
2-Methylnaphthalene	1.60	1.15		ug/L		72	44 - 134	5	30
1-Methylnaphthalene	1.60	1.28		ug/L		80	56 - 123	3	30
Acenaphthylene	1.60	1.20		ug/L		75	57 - 134	1	30
Acenaphthene	1.60	1.19		ug/L		74	54 - 132	2	30
Fluorene	1.60	1.24		ug/L		77	59 - 141	1	30
Phenanthrene	1.60	1.23		ug/L		77	57 - 141	1	30
Anthracene	1.60	1.50		ug/L		93	60 - 136	4	30
Fluoranthene	1.60	1.34		ug/L		84	76 - 133	4	30
Pyrene	1.60	1.18		ug/L		74	59 - 145	1	30
Benzo[a]anthracene	1.60	1.31		ug/L		82	76 - 138	7	30
Chrysene	1.60	1.23		ug/L		77	69 - 138	8	30
Benzo[b]fluoranthene	1.60	1.30		ug/L		81	69 - 144	9	30
Benzo[k]fluoranthene	1.60	1.21		ug/L		76	67 - 141	6	30
Benzo[a]pyrene	1.60	1.32		ug/L		83	70 - 141	7	30
Indeno[1,2,3-cd]pyrene	1.60	1.23		ug/L		77	73 - 146	7	30
Dibenz(a,h)anthracene	1.60	1.23		ug/L		77	68 - 144	7	30
Benzo[g,h,i]perylene	1.60	1.23		ug/L		77	68 - 150	8	30

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	78		45 - 126
2-Fluorobiphenyl (Surr)	76		44 - 120
p-Terphenyl-d14	88		51 - 121

Lab Sample ID: MB 590-19633/1-A
 Matrix: Water
 Analysis Batch: 19632

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19633

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
2-Methylnaphthalene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
1-Methylnaphthalene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Acenaphthylene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Acenaphthene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Fluorene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Phenanthrene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Anthracene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Fluoranthene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Pyrene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: MB 590-19633/1-A
 Matrix: Water
 Analysis Batch: 19632

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19633

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzo[a]anthracene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Chrysene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Benzo[b]fluoranthene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Benzo[k]fluoranthene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Benzo[a]pyrene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		10/28/18 14:37	10/28/18 15:44	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	73		45 - 126	10/28/18 14:37	10/28/18 15:44	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/28/18 14:37	10/28/18 15:44	1
p-Terphenyl-d14	85		51 - 121	10/28/18 14:37	10/28/18 15:44	1

Lab Sample ID: LCS 590-19633/2-A
 Matrix: Water
 Analysis Batch: 19632

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19633

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
2-Methylnaphthalene	1.60	1.06		ug/L		66	44 - 134	
1-Methylnaphthalene	1.60	1.18		ug/L		74	56 - 123	
Acenaphthylene	1.60	1.11		ug/L		70	57 - 134	
Acenaphthene	1.60	1.13		ug/L		71	54 - 132	
Fluorene	1.60	1.18		ug/L		74	59 - 141	
Phenanthrene	1.60	1.20		ug/L		75	57 - 141	
Anthracene	1.60	1.46		ug/L		91	60 - 136	
Fluoranthene	1.60	1.32		ug/L		83	76 - 133	
Pyrene	1.60	1.13		ug/L		71	59 - 145	
Benzo[a]anthracene	1.60	1.30		ug/L		81	76 - 138	
Chrysene	1.60	1.33		ug/L		83	69 - 138	
Benzo[b]fluoranthene	1.60	1.29		ug/L		81	69 - 144	
Benzo[k]fluoranthene	1.60	1.26		ug/L		79	67 - 141	
Benzo[a]pyrene	1.60	1.34		ug/L		84	70 - 141	
Indeno[1,2,3-cd]pyrene	1.60	1.28		ug/L		80	73 - 146	
Dibenz(a,h)anthracene	1.60	1.27		ug/L		79	68 - 144	
Benzo[g,h,i]perylene	1.60	1.30		ug/L		81	68 - 150	

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	81		45 - 126
2-Fluorobiphenyl (Surr)	73		44 - 120
p-Terphenyl-d14	81		51 - 121

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: LCSD 590-19633/3-A
 Matrix: Water
 Analysis Batch: 19632

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19633

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Naphthalene	1.60	1.22		ug/L		76	52 - 121	6	30
2-Methylnaphthalene	1.60	1.16		ug/L		72	44 - 134	9	30
1-Methylnaphthalene	1.60	1.28		ug/L		80	56 - 123	9	30
Acenaphthylene	1.60	1.27		ug/L		80	57 - 134	13	30
Acenaphthene	1.60	1.19		ug/L		74	54 - 132	5	30
Fluorene	1.60	1.23		ug/L		77	59 - 141	4	30
Phenanthrene	1.60	1.25		ug/L		78	57 - 141	4	30
Anthracene	1.60	1.50		ug/L		94	60 - 136	2	30
Fluoranthene	1.60	1.38		ug/L		86	76 - 133	4	30
Pyrene	1.60	1.19		ug/L		74	59 - 145	5	30
Benzo[a]anthracene	1.60	1.31		ug/L		82	76 - 138	1	30
Chrysene	1.60	1.34		ug/L		83	69 - 138	1	30
Benzo[b]fluoranthene	1.60	1.30		ug/L		82	69 - 144	1	30
Benzo[k]fluoranthene	1.60	1.32		ug/L		82	67 - 141	4	30
Benzo[a]pyrene	1.60	1.36		ug/L		85	70 - 141	1	30
Indeno[1,2,3-cd]pyrene	1.60	1.28		ug/L		80	73 - 146	1	30
Dibenz(a,h)anthracene	1.60	1.28		ug/L		80	68 - 144	0	30
Benzo[g,h,i]perylene	1.60	1.31		ug/L		82	68 - 150	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	78		45 - 126
2-Fluorobiphenyl (Surr)	89		44 - 120
p-Terphenyl-d14	85		51 - 121

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-19594/1-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		20 - 120	10/25/18 14:20	10/26/18 10:28	1
DCB Decachlorobiphenyl (Surr)	108		36 - 138	10/25/18 14:20	10/26/18 10:28	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 590-19594/2-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19594
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1.60	1.47		ug/L		92	23 - 140
PCB-1260	1.60	1.32		ug/L		83	22 - 139

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	70		20 - 120
DCB Decachlorobiphenyl (Surr)	102		36 - 138

Lab Sample ID: LCSD 590-19594/3-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19594
 %Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016	1.60	1.48		ug/L		93	23 - 140	1	35
PCB-1260	1.60	1.27		ug/L		79	22 - 139	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	62		20 - 120
DCB Decachlorobiphenyl (Surr)	102		36 - 138

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

Lab Sample ID: MB 590-19425/1-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		10/16/18 10:42	10/16/18 13:20	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		10/16/18 10:42	10/16/18 13:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	10/16/18 10:42	10/16/18 13:20	1
n-Triacontane-d62	94		50 - 150	10/16/18 10:42	10/16/18 13:20	1

Lab Sample ID: LCS 590-19425/2-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19425
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.37		mg/L		86	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.66		mg/L		104	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	101		50 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: LCS 590-19425/2-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19425

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>n</i> -Triacontane-d62	99		50 - 150

Lab Sample ID: LCSD 590-19425/3-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	RPD	
							Limits	RPD
Diesel Range Organics (DRO) (C10-C25)	1.60	1.38		mg/L		86	50 - 150	1
Residual Range Organics (RRO) (C25-C36)	1.60	1.67		mg/L		105	50 - 150	1

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	105		50 - 150
<i>n</i> -Triacontane-d62	98		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-1:101018

Lab Sample ID: 590-9656-1

Date Collected: 10/10/18 11:40

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			246.3 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 15:58	NMI	TAL SPK
Total/NA	Prep	3510C			248.7 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 11:29	NMI	TAL SPK
Total/NA	Prep	3510C			269.4 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 17:07	NMI	TAL SPK

Client Sample ID: MW-2:101018

Lab Sample ID: 590-9656-2

Date Collected: 10/10/18 13:10

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 16:25	NMI	TAL SPK
Total/NA	Prep	3510C			248.7 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 11:49	NMI	TAL SPK
Total/NA	Prep	3510C			268.7 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 17:27	NMI	TAL SPK

Client Sample ID: MW-3:101018

Lab Sample ID: 590-9656-3

Date Collected: 10/10/18 15:45

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.2 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 16:51	NMI	TAL SPK
Total/NA	Prep	3510C			248.1 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 12:10	NMI	TAL SPK
Total/NA	Prep	3510C			262 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 17:46	NMI	TAL SPK

Client Sample ID: MW-4:101018

Lab Sample ID: 590-9656-4

Date Collected: 10/10/18 16:30

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			246.8 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 17:18	NMI	TAL SPK
Total/NA	Prep	3510C			247.3 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	19607	10/26/18 12:30	NMI	TAL SPK
Total/NA	Prep	3510C			263.7 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 18:06	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-5A:101018

Lab Sample ID: 590-9656-5

Date Collected: 10/10/18 14:50

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			249.5 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 17:44	NMI	TAL SPK
Total/NA	Prep	3510C			248.4 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 12:51	NMI	TAL SPK
Total/NA	Prep	3510C			268.2 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 18:25	NMI	TAL SPK

Client Sample ID: DUP:101018

Lab Sample ID: 590-9656-6

Date Collected: 10/10/18 08:00

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.8 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 18:11	NMI	TAL SPK
Total/NA	Prep	3510C			248.8 mL	2 mL	19633	10/28/18 14:37	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19632	10/28/18 20:34	NMI	TAL SPK
Total/NA	Prep	3510C			247.1 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 13:11	NMI	TAL SPK
Total/NA	Prep	3510C			269 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 18:45	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

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
8082A	3510C	Water	PCB-1262
8082A	3510C	Water	PCB-1268

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

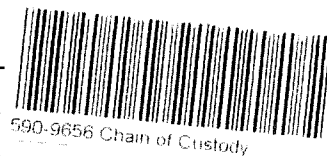
TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

ANALYSIS REQUEST FORM (REV. 01/11)



10/30/2018

Client Information	Sampler <i>Lee O</i>	Lab PM Arrington, Randee E
Client Contact Josh Lee	Phone <i>(408) 770-310</i>	E-Mail randee.arrington@testa
Company GeoEngineers Inc	Analysis Requested	

314-1252.1
1 of 1

Address 523 East Second Ave	Due Date Requested: <i>10/10/18</i>	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8270D_SIM - Polycyclic Aromatic Hydrocarbons 8062A - PCBs - Standard List NMTPH_Dx - DRO and RRO
City Spokane	TAT Requested (days): <i>50</i>	
State/Zip WA, 99202	PO # Purchase Order not required	
Phone 406-239-7810(Tel)	WO #	
Email jmlee@geoengineers.com	Project # 59001557	
Project Name Avista-Spokane Service Cl/2522-079-01	SSOW#	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4.5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested			Total Number of Containers	Special Instructions/Note:
							8270D_SIM - Polycyclic Aromatic Hydrocarbons	8062A - PCBs - Standard List	NMTPH_Dx - DRO and RRO		
<i>MW11 101018</i>	<i>10/10/18</i>	<i>1140</i>	<i>G</i>	<i>Water</i>	<i>X</i>	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>	<i>1</i>	
<i>MW2 101018</i>	<i>10/10/18</i>	<i>1310</i>	<i>G</i>	<i>Water</i>	<i>X</i>	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>	<i>1</i>	
<i>MW3 101018</i>	<i>10/10/18</i>	<i>1445</i>	<i>G</i>	<i>Water</i>	<i>X</i>	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>	<i>1</i>	
<i>MW4 101018</i>	<i>10/10/18</i>	<i>1630</i>	<i>G</i>	<i>Water</i>	<i>X</i>	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>	<i>1</i>	
<i>MW5A 101018</i>	<i>10/10/18</i>	<i>1750</i>	<i>G</i>	<i>Water</i>	<i>X</i>	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>	<i>1</i>	
<i>DWP 101018</i>	<i>10/10/17</i>	<i>0800</i>	<i>G</i>	<i>Water</i>	<i>X</i>	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>	<i>1</i>	

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
---	--

Deliverable Requested: I, II, III, IV, Other (specify) _____ Special Instructions/QC Requirements: _____

Empty Kit Relinquished by: _____	Date: _____	Time: _____	Method of Shipment: _____
Relinquished by: <i>[Signature]</i>	Date/Time: <i>10/12/18 10:30</i>	Company: <i>566</i>	Received by: <i>[Signature]</i>
Relinquished by: _____	Date/Time: _____	Company: _____	Received by: _____
Relinquished by: _____	Date/Time: _____	Company: _____	Received by: _____

Custody Seals Intact: Yes No Custody Seal No: _____ Cooler Temperature(s) °C and Other Remarks: *D-ECT ROOM*

Page 22 of 23

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9656-1

Login Number: 9656

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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 $<6\text{mm}$ ($1/4''$).	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

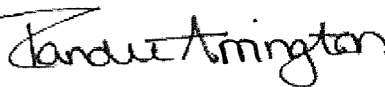
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9656-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



Authorized for release by:
10/26/2018 4:08:23 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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results through
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Expert**

Visit us at:
www.testamericainc.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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Preliminary Data

Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Job ID: 590-9656-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 10/12/2018 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

GC/MS Semi 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.

Organic Prep

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

Preliminary Data

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9656-1	MW-1:101018	Water	10/10/18 11:40	10/12/18 08:30
590-9656-2	MW-2:101018	Water	10/10/18 13:10	10/12/18 08:30
590-9656-3	MW-3:101018	Water	10/10/18 15:45	10/12/18 08:30
590-9656-4	MW-4:101018	Water	10/10/18 16:30	10/12/18 08:30
590-9656-5	MW-5A:101018	Water	10/10/18 14:50	10/12/18 08:30
590-9656-6	DUP:101018	Water	10/10/18 08:00	10/12/18 08:30

Preliminary Data

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Preliminary Data

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-1:101018

Lab Sample ID: 590-9656-1

Date Collected: 10/10/18 11:40

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	72		45 - 126	10/15/18 12:57	10/15/18 15:58	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/15/18 12:57	10/15/18 15:58	1
p-Terphenyl-d14	83		51 - 121	10/15/18 12:57	10/15/18 15:58	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		20 - 120	10/25/18 14:20	10/26/18 11:29	1
DCB Decachlorobiphenyl (Surr)	92		36 - 138	10/25/18 14:20	10/26/18 11:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 17:07	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150	10/16/18 10:42	10/16/18 17:07	1
n-Triacontane-d62	95		50 - 150	10/16/18 10:42	10/16/18 17:07	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-2:101018

Lab Sample ID: 590-9656-2

Date Collected: 10/10/18 13:10

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		45 - 126	10/15/18 12:57	10/15/18 16:25	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/15/18 12:57	10/15/18 16:25	1
p-Terphenyl-d14	86		51 - 121	10/15/18 12:57	10/15/18 16:25	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 11:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		20 - 120	10/25/18 14:20	10/26/18 11:49	1
DCB Decachlorobiphenyl (Surr)	96		36 - 138	10/25/18 14:20	10/26/18 11:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 17:27	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 17:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150	10/16/18 10:42	10/16/18 17:27	1
n-Triacontane-d62	92		50 - 150	10/16/18 10:42	10/16/18 17:27	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-3:101018

Lab Sample ID: 590-9656-3

Date Collected: 10/10/18 15:45

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		45 - 126	10/15/18 12:57	10/15/18 16:51	1
2-Fluorobiphenyl (Surr)	77		44 - 120	10/15/18 12:57	10/15/18 16:51	1
p-Terphenyl-d14	90		51 - 121	10/15/18 12:57	10/15/18 16:51	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		20 - 120	10/25/18 14:20	10/26/18 12:10	1
DCB Decachlorobiphenyl (Surr)	91		36 - 138	10/25/18 14:20	10/26/18 12:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23		mg/L		10/16/18 10:42	10/16/18 17:46	1
Residual Range Organics (RRO) (C25-C36)	ND		0.38		mg/L		10/16/18 10:42	10/16/18 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150	10/16/18 10:42	10/16/18 17:46	1
n-Triacontane-d62	95		50 - 150	10/16/18 10:42	10/16/18 17:46	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-4:101018

Lab Sample ID: 590-9656-4

Date Collected: 10/10/18 16:30

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
2-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
1-Methylnaphthalene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Acenaphthylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Acenaphthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Fluorene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Phenanthrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[a]anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Chrysene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[b]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[k]fluoranthene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[a]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		10/15/18 12:57	10/15/18 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		45 - 126	10/15/18 12:57	10/15/18 17:18	1
2-Fluorobiphenyl (Surr)	74		44 - 120	10/15/18 12:57	10/15/18 17:18	1
p-Terphenyl-d14	81		51 - 121	10/15/18 12:57	10/15/18 17:18	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		20 - 120	10/25/18 14:20	10/26/18 12:30	1
DCB Decachlorobiphenyl (Surr)	92		36 - 138	10/25/18 14:20	10/26/18 12:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23		mg/L		10/16/18 10:42	10/16/18 18:06	1
Residual Range Organics (RRO) (C25-C36)	ND		0.38		mg/L		10/16/18 10:42	10/16/18 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150	10/16/18 10:42	10/16/18 18:06	1
n-Triacontane-d62	92		50 - 150	10/16/18 10:42	10/16/18 18:06	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-5A:101018

Lab Sample ID: 590-9656-5

Date Collected: 10/10/18 14:50

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
2-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
1-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Acenaphthylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Acenaphthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Fluorene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Phenanthrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[a]anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Chrysene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[b]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[k]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[a]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	88		45 - 126	10/15/18 12:57	10/15/18 17:44	1
2-Fluorobiphenyl (Surr)	84		44 - 120	10/15/18 12:57	10/15/18 17:44	1
p-Terphenyl-d14	89		51 - 121	10/15/18 12:57	10/15/18 17:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		20 - 120	10/25/18 14:20	10/26/18 12:51	1
DCB Decachlorobiphenyl (Surr)	104		36 - 138	10/25/18 14:20	10/26/18 12:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 18:25	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	10/16/18 10:42	10/16/18 18:25	1
n-Triacontane-d62	90		50 - 150	10/16/18 10:42	10/16/18 18:25	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: DUP:101018

Lab Sample ID: 590-9656-6

Date Collected: 10/10/18 08:00

Matrix: Water

Date Received: 10/12/18 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
2-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
1-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Acenaphthylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Acenaphthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Fluorene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Phenanthrene	0.25		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Fluoranthene	0.65		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Pyrene	0.50		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Benzo[a]anthracene	0.38		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Chrysene	0.51		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Benzo[b]fluoranthene	0.72		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Benzo[k]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Benzo[a]pyrene	0.40		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Indeno[1,2,3-cd]pyrene	0.23		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1
Benzo[g,h,i]perylene	0.24		0.090		ug/L		10/15/18 12:57	10/15/18 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		45 - 126	10/15/18 12:57	10/15/18 18:11	1
2-Fluorobiphenyl (Surr)	81		44 - 120	10/15/18 12:57	10/15/18 18:11	1
p-Terphenyl-d14	85		51 - 121	10/15/18 12:57	10/15/18 18:11	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		20 - 120	10/25/18 14:20	10/26/18 13:11	1
DCB Decachlorobiphenyl (Surr)	94		36 - 138	10/25/18 14:20	10/26/18 13:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22		mg/L		10/16/18 10:42	10/16/18 18:45	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37		mg/L		10/16/18 10:42	10/16/18 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150	10/16/18 10:42	10/16/18 18:45	1
n-Triacontane-d62	92		50 - 150	10/16/18 10:42	10/16/18 18:45	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: MB 590-19408/1-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19408

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
2-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
1-Methylnaphthalene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Acenaphthylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Acenaphthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Fluorene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Phenanthrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[a]anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Chrysene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[b]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[k]fluoranthene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[a]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		10/15/18 12:57	10/15/18 14:12	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	73		45 - 126	10/15/18 12:57	10/15/18 14:12	1
2-Fluorobiphenyl (Surr)	75		44 - 120	10/15/18 12:57	10/15/18 14:12	1
p-Terphenyl-d14	83		51 - 121	10/15/18 12:57	10/15/18 14:12	1

Lab Sample ID: LCS 590-19408/2-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19408

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Naphthalene	1.60	1.20		ug/L		75	52 - 121
2-Methylnaphthalene	1.60	1.20		ug/L		75	44 - 134
1-Methylnaphthalene	1.60	1.32		ug/L		82	56 - 123
Acenaphthylene	1.60	1.21		ug/L		76	57 - 134
Acenaphthene	1.60	1.21		ug/L		76	54 - 132
Fluorene	1.60	1.25		ug/L		78	59 - 141
Phenanthrene	1.60	1.24		ug/L		78	57 - 141
Anthracene	1.60	1.55		ug/L		97	60 - 136
Fluoranthene	1.60	1.40		ug/L		87	76 - 133
Pyrene	1.60	1.19		ug/L		74	59 - 145
Benzo[a]anthracene	1.60	1.41		ug/L		88	76 - 138
Chrysene	1.60	1.33		ug/L		83	69 - 138
Benzo[b]fluoranthene	1.60	1.42		ug/L		89	69 - 144
Benzo[k]fluoranthene	1.60	1.28		ug/L		80	67 - 141
Benzo[a]pyrene	1.60	1.41		ug/L		88	70 - 141
Indeno[1,2,3-cd]pyrene	1.60	1.32		ug/L		83	73 - 146
Dibenz(a,h)anthracene	1.60	1.32		ug/L		83	68 - 144
Benzo[g,h,i]perylene	1.60	1.33		ug/L		83	68 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: LCS 590-19408/2-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19408

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	81		45 - 126
2-Fluorobiphenyl (Surr)	83		44 - 120
p-Terphenyl-d14	92		51 - 121

Lab Sample ID: LCSD 590-19408/3-A
 Matrix: Water
 Analysis Batch: 19404

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19408

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	
								RPD	Limit
Naphthalene	1.60	1.15		ug/L		72	52 - 121	4	30
2-Methylnaphthalene	1.60	1.15		ug/L		72	44 - 134	5	30
1-Methylnaphthalene	1.60	1.28		ug/L		80	56 - 123	3	30
Acenaphthylene	1.60	1.20		ug/L		75	57 - 134	1	30
Acenaphthene	1.60	1.19		ug/L		74	54 - 132	2	30
Fluorene	1.60	1.24		ug/L		77	59 - 141	1	30
Phenanthrene	1.60	1.23		ug/L		77	57 - 141	1	30
Anthracene	1.60	1.50		ug/L		93	60 - 136	4	30
Fluoranthene	1.60	1.34		ug/L		84	76 - 133	4	30
Pyrene	1.60	1.18		ug/L		74	59 - 145	1	30
Benzo[a]anthracene	1.60	1.31		ug/L		82	76 - 138	7	30
Chrysene	1.60	1.23		ug/L		77	69 - 138	8	30
Benzo[b]fluoranthene	1.60	1.30		ug/L		81	69 - 144	9	30
Benzo[k]fluoranthene	1.60	1.21		ug/L		76	67 - 141	6	30
Benzo[a]pyrene	1.60	1.32		ug/L		83	70 - 141	7	30
Indeno[1,2,3-cd]pyrene	1.60	1.23		ug/L		77	73 - 146	7	30
Dibenz(a,h)anthracene	1.60	1.23		ug/L		77	68 - 144	7	30
Benzo[g,h,i]perylene	1.60	1.23		ug/L		77	68 - 150	8	30

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	78		45 - 126
2-Fluorobiphenyl (Surr)	76		44 - 120
p-Terphenyl-d14	88		51 - 121

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-19594/1-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19594

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1221	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1232	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1242	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1248	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1254	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1260	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-19594/1-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19594

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1268	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
PCB-1262	ND		0.10		ug/L		10/25/18 14:20	10/26/18 10:28	1
Surrogate	MB MB		Limits			D	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier								
Tetrachloro-m-xylene	82		20 - 120				10/25/18 14:20	10/26/18 10:28	1
DCB Decachlorobiphenyl (Surr)	108		36 - 138				10/25/18 14:20	10/26/18 10:28	1

Lab Sample ID: LCS 590-19594/2-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19594

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
PCB-1016	1.60	1.47		ug/L		92	23 - 140	
PCB-1260	1.60	1.32		ug/L		83	22 - 139	
Surrogate	LCS LCS		Limits			D	%Rec	Limits
%Recovery	Qualifier							
Tetrachloro-m-xylene	70		20 - 120					
DCB Decachlorobiphenyl (Surr)	102		36 - 138					

Lab Sample ID: LCSD 590-19594/3-A
 Matrix: Water
 Analysis Batch: 19607

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19594

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	Limit
PCB-1016	1.60	1.48		ug/L		93	23 - 140	1	35	
PCB-1260	1.60	1.27		ug/L		79	22 - 139	4	35	
Surrogate	LCSD LCSD		Limits			D	%Rec	Limits	RPD	Limit
%Recovery	Qualifier									
Tetrachloro-m-xylene	62		20 - 120							
DCB Decachlorobiphenyl (Surr)	102		36 - 138							

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

Lab Sample ID: MB 590-19425/1-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19425

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		10/16/18 10:42	10/16/18 13:20	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		10/16/18 10:42	10/16/18 13:20	1
Surrogate	MB MB		Limits			D	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier								
o-Terphenyl	97		50 - 150				10/16/18 10:42	10/16/18 13:20	1
n-Triacontane-d62	94		50 - 150				10/16/18 10:42	10/16/18 13:20	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

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

Lab Sample ID: LCS 590-19425/2-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.37		mg/L		86	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.66		mg/L		104	50 - 150
Surrogate		LCS %Recovery	LCS Qualifier				Limits
<i>o</i> -Terphenyl		101					50 - 150
<i>n</i> -Triacontane-d62		99					50 - 150

Lab Sample ID: LCSD 590-19425/3-A
 Matrix: Water
 Analysis Batch: 19427

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Diesel Range Organics (DRO) (C10-C25)	1.60	1.38		mg/L		86	50 - 150	1	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.67		mg/L		105	50 - 150	1	25
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
<i>o</i> -Terphenyl		105					50 - 150		
<i>n</i> -Triacontane-d62		98					50 - 150		

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-1:101018

Date Collected: 10/10/18 11:40

Date Received: 10/12/18 08:30

Lab Sample ID: 590-9656-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			246.3 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 15:58	NMI	TAL SPK
Total/NA	Prep	3510C			248.7 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 11:29	NMI	TAL SPK
Total/NA	Prep	3510C			269.4 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 17:07	NMI	TAL SPK

Client Sample ID: MW-2:101018

Date Collected: 10/10/18 13:10

Date Received: 10/12/18 08:30

Lab Sample ID: 590-9656-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 16:25	NMI	TAL SPK
Total/NA	Prep	3510C			248.7 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 11:49	NMI	TAL SPK
Total/NA	Prep	3510C			268.7 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 17:27	NMI	TAL SPK

Client Sample ID: MW-3:101018

Date Collected: 10/10/18 15:45

Date Received: 10/12/18 08:30

Lab Sample ID: 590-9656-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.2 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 16:51	NMI	TAL SPK
Total/NA	Prep	3510C			248.1 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 12:10	NMI	TAL SPK
Total/NA	Prep	3510C			262 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 17:46	NMI	TAL SPK

Client Sample ID: MW-4:101018

Date Collected: 10/10/18 16:30

Date Received: 10/12/18 08:30

Lab Sample ID: 590-9656-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			246.8 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 17:18	NMI	TAL SPK
Total/NA	Prep	3510C			247.3 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	19607	10/26/18 12:30	NMI	TAL SPK
Total/NA	Prep	3510C			263.7 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 18:06	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Client Sample ID: MW-5A:101018

Lab Sample ID: 590-9656-5

Date Collected: 10/10/18 14:50

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			249.5 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 17:44	NMI	TAL SPK
Total/NA	Prep	3510C			248.4 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 12:51	NMI	TAL SPK
Total/NA	Prep	3510C			268.2 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 18:25	NMI	TAL SPK

Client Sample ID: DUP:101018

Lab Sample ID: 590-9656-6

Date Collected: 10/10/18 08:00

Matrix: Water

Date Received: 10/12/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			248.8 mL	2 mL	19408	10/15/18 12:57	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19404	10/15/18 18:11	NMI	TAL SPK
Total/NA	Prep	3510C			247.1 mL	2 mL	19594	10/25/18 14:20	NMI	TAL SPK
Total/NA	Analysis	8082A		1			19607	10/26/18 13:11	NMI	TAL SPK
Total/NA	Prep	3510C			269 mL	2 mL	19425	10/16/18 10:42	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			19427	10/16/18 18:45	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

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
8082A	3510C	Water	PCB-1262
8082A	3510C	Water	PCB-1268

Preliminary Data

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9656-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Preliminary Data

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9656-1

Login Number: 9656

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

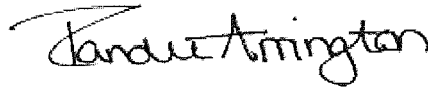
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-9956-1
Client Project/Site: Avista-Spokane Service Ctr/2522-079-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee



Authorized for release by:
11/26/2018 10:50:29 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

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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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Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Job ID: 590-9956-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 11/20/2018 12:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

GC/MS Semi VOA

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.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-9956-1	MW-1:112018	Water	11/20/18 10:35	11/20/18 12:00

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Client Sample ID: MW-1:112018

Lab Sample ID: 590-9956-1

Date Collected: 11/20/18 10:35

Matrix: Water

Date Received: 11/20/18 12:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
2-Methylnaphthalene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
1-Methylnaphthalene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Acenaphthylene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Acenaphthene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Fluorene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Phenanthrene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Anthracene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Fluoranthene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Pyrene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Benzo[a]anthracene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Chrysene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Benzo[b]fluoranthene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Benzo[k]fluoranthene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Benzo[a]pyrene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Indeno[1,2,3-cd]pyrene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Dibenz(a,h)anthracene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1
Benzo[g,h,i]perylene	ND		0.093		ug/L		11/20/18 13:10	11/20/18 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		45 - 126	11/20/18 13:10	11/20/18 14:56	1
2-Fluorobiphenyl (Surr)	64		44 - 120	11/20/18 13:10	11/20/18 14:56	1
p-Terphenyl-d14	67		51 - 121	11/20/18 13:10	11/20/18 14:56	1

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

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

Lab Sample ID: MB 590-19976/1-A
 Matrix: Water
 Analysis Batch: 19975

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 19976

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
2-Methylnaphthalene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
1-Methylnaphthalene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Acenaphthylene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Acenaphthene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Fluorene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Phenanthrene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Anthracene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Fluoranthene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Pyrene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Benzo[a]anthracene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Chrysene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Benzo[b]fluoranthene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Benzo[k]fluoranthene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Benzo[a]pyrene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		11/20/18 10:40	11/20/18 11:19	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	96		45 - 126	11/20/18 10:40	11/20/18 11:19	1
2-Fluorobiphenyl (Surr)	79		44 - 120	11/20/18 10:40	11/20/18 11:19	1
p-Terphenyl-d14	81		51 - 121	11/20/18 10:40	11/20/18 11:19	1

Lab Sample ID: LCS 590-19976/2-A
 Matrix: Water
 Analysis Batch: 19975

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19976

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	1.60	1.02		ug/L		64	52 - 121
2-Methylnaphthalene	1.60	0.983		ug/L		61	44 - 134
1-Methylnaphthalene	1.60	1.11		ug/L		69	56 - 123
Acenaphthylene	1.60	1.06		ug/L		66	57 - 134
Acenaphthene	1.60	1.06		ug/L		66	54 - 132
Fluorene	1.60	1.09		ug/L		68	59 - 141
Phenanthrene	1.60	1.13		ug/L		71	57 - 141
Anthracene	1.60	1.37		ug/L		85	60 - 136
Fluoranthene	1.60	1.24		ug/L		77	76 - 133
Pyrene	1.60	1.06		ug/L		66	59 - 145
Benzo[a]anthracene	1.60	1.25		ug/L		78	76 - 138
Chrysene	1.60	1.29		ug/L		80	69 - 138
Benzo[b]fluoranthene	1.60	1.21		ug/L		76	69 - 144
Benzo[k]fluoranthene	1.60	1.22		ug/L		76	67 - 141
Benzo[a]pyrene	1.60	1.29		ug/L		80	70 - 141
Indeno[1,2,3-cd]pyrene	1.60	1.21		ug/L		76	73 - 146
Dibenz(a,h)anthracene	1.60	1.19		ug/L		75	68 - 144
Benzo[g,h,i]perylene	1.60	1.22		ug/L		76	68 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

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

Lab Sample ID: LCS 590-19976/2-A
 Matrix: Water
 Analysis Batch: 19975

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 19976

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	86		45 - 126
2-Fluorobiphenyl (Surr)	72		44 - 120
p-Terphenyl-d14	74		51 - 121

Lab Sample ID: LCSD 590-19976/3-A
 Matrix: Water
 Analysis Batch: 19975

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 19976

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	RPD	
							Limits	RPD
Naphthalene	1.60	1.01		ug/L		63	52 - 121	0
2-Methylnaphthalene	1.60	0.927		ug/L		58	44 - 134	6
1-Methylnaphthalene	1.60	1.05		ug/L		66	56 - 123	5
Acenaphthylene	1.60	1.06		ug/L		66	57 - 134	0
Acenaphthene	1.60	1.05		ug/L		65	54 - 132	1
Fluorene	1.60	1.07		ug/L		67	59 - 141	1
Phenanthrene	1.60	1.13		ug/L		71	57 - 141	0
Anthracene	1.60	1.38		ug/L		86	60 - 136	1
Fluoranthene	1.60	1.22		ug/L		76	76 - 133	2
Pyrene	1.60	0.960		ug/L		60	59 - 145	10
Benzo[a]anthracene	1.60	1.26		ug/L		79	76 - 138	1
Chrysene	1.60	1.28		ug/L		80	69 - 138	0
Benzo[b]fluoranthene	1.60	1.29		ug/L		81	69 - 144	6
Benzo[k]fluoranthene	1.60	1.17		ug/L		73	67 - 141	4
Benzo[a]pyrene	1.60	1.29		ug/L		81	70 - 141	0
Indeno[1,2,3-cd]pyrene	1.60	1.25		ug/L		78	73 - 146	3
Dibenz(a,h)anthracene	1.60	1.24		ug/L		77	68 - 144	4
Benzo[g,h,i]perylene	1.60	1.21		ug/L		75	68 - 150	1

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	86		45 - 126
2-Fluorobiphenyl (Surr)	72		44 - 120
p-Terphenyl-d14	69		51 - 121

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Client Sample ID: MW-1:112018

Lab Sample ID: 590-9956-1

Date Collected: 11/20/18 10:35

Matrix: Water

Date Received: 11/20/18 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			243 mL	2 mL	19976	11/20/18 13:10	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			19975	11/20/18 14:56	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Laboratory: TestAmerica Spokane

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

<u>Authority</u>	<u>Program</u>	<u>EPA Region</u>	<u>Identification Number</u>	<u>Expiration Date</u>
Washington	State Program	10	C569	01-06-19

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.

<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
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Method Summary

Client: GeoEngineers Inc
Project/Site: Avista-Spokane Service Ctr/2522-079-01

TestAmerica Job ID: 590-9956-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-9956-1

Login Number: 9956

List Source: TestAmerica Spokane

List Number: 1

Creator: Northrup, Trinitie L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

APPENDIX C
Spokane Environmental Services Documentation

INVOICE



SPOKANE ENVIRONMENTAL SOLUTIONS
 Spokane Environmental Solutions, LLC
 P.O. Box 540
 Colbert WA, 99005
 Phone (509) 688-5376

PLEASE REMIT CHECK PAYMENT TO:
 Spokane Environmental Solutions, LLC
 PO BOX 540
 Colbert, WA 99005

 Spokane Environmental Solutions, LLC
 Inland Northwest Bank
 ABA# 125108104
 A/C# 41010422

Invoice Date: September 12, 2018

Invoice #: 0100-006-01
 SES Job #: 0100-006
 Customer PO #: 2522-079-01

Customer: GeoEngineers, Inc.
523 E. Second Ave.
Spokane, WA 99202

Contact: Joshua M. Lee
 Phone: 509-363 3 125
 Fax: 509-363-3126
 Terms: per MSA

Job Description: Avista Fleet Service Building Excavation

Job Location: Spokane, Washington

Job Date (s): 9/4/18 - 9/10/18

	CONTRACT AMOUNT	Quantity	Units	Unit Cost	Extended Price
1	Excavation and Loading	1879.21	Ton	\$ 4.00	\$ 7,516.84
2	Transportation for Disposal	1879.21	Ton	\$ 9.00	\$ 16,912.89
3	Disposal	1879.21	Ton	\$ 40.50	\$ 76,108.01
4	Placement and Compaction of Backfill	0.00	Ton	\$ 7.00	\$ -
5	Import Material	1296.67	Ton	\$ 14.50	\$ 18,801.72
Alt. 1	Place, Grade and Compact Liner Bedding	0.00	Ton	\$ 40.00	\$ -
Alt. 2	Subcontract Liner	0.00	Lot	\$ 13,200.00	\$ -
Alt. 3	Connect Liner Drain to existing Storm	0.00	LS	\$ 800.00	\$ -
Alt. 4	Install 180N geotextile fabric over sand layer	0.00	SF	\$ 0.20	\$ -
Alt. 5	Cap Liner with 1.0' drain layer	0.00	Ton	\$ 46.00	\$ -
Alt. 6	Install 180N geotextile fabric over drain layer	0.00	SF	\$ 0.20	\$ -
CO1	Test Pit Activities	1.00	Lot	\$ 2,700.00	\$ 2,700.00
Subtotal					\$ 122,039.45
Sales Tax 8.8%					\$ 10,739.47
Total					\$ 132,778.92

Jeff Heeter

Direct Phone 509-279-5559
 Fax

FED ID #: 82-1501120
 WA CCB #SPOKAES832LR
 ID CCB #RCE-46695

A 1.5% per month finance charge will be assessed for all past due invoices to include the flat late fee amount.

JOB NUMBER:	JOB TYPE:	Services	WEEK ENDING: 09/01/18									CUSTOMER:	PROJECT MANAGER:																	
LABOR CHARGES			Hourly Rates			08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Hours			
Name	Position	Rate 1	Rate 2	Rate 3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	Rate 1	Rate 2	Rate 3	Weekly Total	
Smith, Chris	PS	\$75.00	\$75.00	\$75.00	8.0																				8.0	0.0	0.0	\$600.00		
Ishihara, Flavio	PS	\$75.00	\$75.00	\$75.00	8.0																				8.0	0.0	0.0	\$600.00		
		\$0.00	\$0.00	\$0.00																					0.0	0.0	0.0	\$0.00		
		\$0.00	\$0.00	\$0.00																					0.0	0.0	0.0	\$0.00		
Per diem per person - Food			\$50.00																								0.0			\$0.00
Per diem per person - Lodging			\$100.00																								0.0			\$0.00
Weekly Total Labor Charges: \$1,200.00																														
EQUIPMENT CHARGES						08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Quantity			Weekly Total
Equipment Description	Billing Code	Comment	Rate	Unit	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity		
Excavator, 38,000 to 53,000 lb	5009		\$800.00	Day	1																				1			\$800.00		
Loader, up to 4 yds.	5015		\$550.00	Day	1																				1			\$550.00		
Truck, Gear, 1 ton	7012		\$150.00	Day	1																				1			\$150.00		
0			\$0.00	0																					0			\$0.00		
Weekly Total Equipment Charges: \$1,500.00																														
MATERIAL CHARGES						08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Quantity			Weekly Total
Material Description	Billing Code	Comment	Rate	Unit	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity		
0			\$0.00	0																						0		\$0.00		
0			\$0.00	0																						0		\$0.00		
Weekly Total Material Charges: \$0.00																														
OUTSIDE SERVICES - Cost Plus 20%						08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Cost		20%	Weekly Total
Service Description	Vendor Name	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost		
																											\$0.00	0.00	\$0.00	
																											\$0.00	0.00	\$0.00	
																											\$0.00	0.00	\$0.00	
Weekly Total Outside Services: \$0.00																														
TRANSPORTATION & DISPOSAL - Per Bid						08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Bid		Weekly Total	
Service Description	Vendor Name	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid		
																												\$0.00		
																												\$0.00		
																												\$0.00		
Weekly Total Transportation & Disposal Charges: \$0.00																														
Weekly Total Charges: \$2,700.00																														

Project Manager's Approval: _____



P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 365018
Inv Date: 09/04/18
Page: Page 1 of 1
Customer PO: ICA SRP ALL JOBS 201

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

Interstate Concrete & Asphalt
P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
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Plant: 02717 ICA - Airway Heights UPS&G

JOB # / PO # / ICA SRP ALL JOBS 201

09/04/18 2323 - SELECT FILL 298.15 TON

Total Invoice: 298.15

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G

*14106605	*14106606	*14106626	*14106628	*14106651	*14106652	*14106662	*14106674
*14106676	*14106688						

Our Customer Portal is now available! Register at MYMATERIALSPORTAL.COM or call accounts receivable at (509) 534-6221 for assistance.

Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 365018
Date: 09/4/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
P.O. Box 742347
Los Angeles, CA 90074

Customer PO: ICA SRP ALL JOBS 201
Due Date: 10/10/18

Please provide your email address below if you would like to start receiving your invoices via email



P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 366054
Inv Date: 09/05/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

Interstate Concrete & Asphalt
P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
------	-----------------------------	-----	----	------------	----------	------------	------------	-----	-------

Plant: 02717 ICA - Airway Heights UPS&G

09/05/18 2323 - SELECT FILL **339.40 TON**

Total Invoice: 339.40

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G

*14106724	*14106725	*14106732	*14106757	*14106766	*14106775	*14106804	*14106809
*14106813	*14106842	*14106859					

Our Customer Portal is now available! Register at MYMATERIALSPORTAL.COM or call accounts receivable at (509) 534-6221 for assistance.

Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 366054
Date: 09/5/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
P.O. Box 742347
Los Angeles, CA 90074

Please provide your email address below if you would like to start receiving your invoices via email



P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 367410
Inv Date: 09/06/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

Interstate Concrete & Asphalt
P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02717 ICA - Airway Heights UPS&G									
09/06/18	2323 - SELECT FILL	300.15	TON						

Total Invoice: 300.15

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G

*14106921	*14106929	*14106966	*14106971	*14106992	*14107004	*14107021	*14107040
*14107044	*14107056						

Our Customer Portal is now available! Register at MYMATERIALSPORTAL.COM or call accounts receivable at (509) 534-6221 for assistance.

Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 367410
Date: 09/6/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
P.O. Box 742347
Los Angeles, CA 90074

Please provide your email address below if you would like to start receiving your invoices via email



P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 367871
Inv Date: 09/07/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

Interstate Concrete & Asphalt
P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
------	-----------------------------	-----	----	------------	----------	------------	------------	-----	-------

Plant: 02717 ICA - Airway Heights UPS&G

09/07/18 2323 - SELECT FILL

358.97 TON

Total Invoice: 358.97

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G

*14107141	*14107142	*14107145	*14107175	*14107176	*14107178	*14107197	*14107199
*14107200	*14107218	*14107220	*14107222				

Our Customer Portal is now available! Register at MYMATERIALSPORTAL.COM or call accounts receivable at (509) 534-6221 for assistance.

Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 367871
Date: 09/7/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
P.O. Box 742347
Los Angeles, CA 90074

Please provide your email address below if you would like to start receiving your invoices via email

<i>Date</i>	<i>Profile #</i>	<i>Manifest #</i>	<i>Ticket #</i>	<i>Waste</i>	<i>Facility</i>	<i>Tons/ Tonnes</i>	<i>Material Quantity</i>	<i>Material Unit</i>
9/10/2018	113629WA	113629WA	574647	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	26.59	26.59	TON
9/10/2018	113629WA	113629WA	574645	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.33	30.33	TON
9/10/2018	113629WA	113629WA	574643	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.63	33.63	TON
9/10/2018	113629WA	113629WA	574631	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	28.09	28.09	TON
9/10/2018	113629WA	113629wa	574625	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	32.21	32.21	TON
9/10/2018	113629WA	113629wa	574621	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.25	29.25	TON
9/10/2018	113629WA	113629wa	574615	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33	33	TON
9/10/2018	113629WA	113629wa	574598	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	27.37	27.37	TON
9/10/2018	113629WA	113629WA	574595	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	28.17	28.17	TON
9/10/2018	113629WA	113629WA	574594	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.04	30.04	TON
9/10/2018	113629WA	113629wa	574592	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.74	31.74	TON
9/10/2018	113629WA	113629wa	574569	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	26	26	TON
9/10/2018	113629WA	113629wa	574565	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	23.69	23.69	TON
9/10/2018	113629WA	113629wa	574564	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.45	30.45	TON
9/10/2018	113629WA	113629wa	574561	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	36.01	36.01	TON
9/10/2018	113629WA	113629wa	574572	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.42	30.42	TON
9/10/2018	113629WA	113629wa	574567	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.79	33.79	TON
9/10/2018	113629WA	113629wa	574562	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.24	31.24	TON
9/7/2018	113629WA	113629wa	574518	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.45	30.45	TON
9/7/2018	113629WA	113629wa	574517	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.46	29.46	TON
9/7/2018	113629WA	113629wa	574515	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.33	33.33	TON
9/7/2018	113629WA	113629WA	574498	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.66	29.66	TON
9/7/2018	113629WA	113629WA	574490	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.45	31.45	TON
9/7/2018	113629WA	113629WA	574486	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.43	30.43	TON
9/7/2018	113629WA	113629WA	574482	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	32.77	32.77	TON
9/7/2018	113629WA	113629wa	574444	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.12	30.12	TON
9/7/2018	113629WA	113629wa	574443	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.85	29.85	TON
9/7/2018	113629WA	113629wa	574442	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	32.16	32.16	TON
9/6/2018	113629WA	113629wa	574403	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.03	33.03	TON
9/6/2018	113629WA	113629wa	574400	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.86	30.86	TON
9/6/2018	113629WA	113629wa	574391	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.18	30.18	TON
9/6/2018	113629WA	113629wa	574375	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.99	30.99	TON
9/6/2018	113629WA	113629wa	574366	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.58	29.58	TON
9/6/2018	113629WA	113629WA	574351	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.93	31.93	TON
9/6/2018	113629WA	113629wa	574344	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.92	30.92	TON
9/6/2018	113629WA	113629wa	574320	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.58	31.58	TON

<i>Date</i>	<i>Profile #</i>	<i>Manifest #</i>	<i>Ticket #</i>	<i>Waste</i>	<i>Facility</i>	<i>Tons/ Tonnes</i>	<i>Material Quantity</i>	<i>Material Unit</i>
9/6/2018	113629WA	113629WA	574307	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	32.51	32.51	TON
9/6/2018	113629WA	113629WA	574288	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.54	31.54	TON
9/6/2018	113629WA	113629wa	574282	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	35.92	35.92	TON
9/5/2018	113629WA	113629wa	574270	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.86	31.86	TON
9/5/2018	113629WA	113629wa	574249	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.34	30.34	TON
9/5/2018	113629WA	113629wa	574452	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.15	33.15	TON
9/5/2018	113629WA	113629WA	574455	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.6	29.6	TON
9/5/2018	113629WA	113629WA	574456	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.35	33.35	TON
9/5/2018	113629WA	113629WA	574457	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.94	31.94	TON
9/5/2018	113629WA	113629wa	574458	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.8	30.8	TON
9/5/2018	113629WA	113629wa	574459	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	27.88	27.88	TON
9/5/2018	113629WA	113629WA	574460	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	27.32	27.32	TON
9/5/2018	113629WA	113629wa	574463	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.15	30.15	TON
9/5/2018	113629WA	113629wa	574464	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	27.44	27.44	TON
9/5/2018	113629WA	113629wa	574465	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.24	33.24	TON
9/4/2018	113629WA	113629WA	574135	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	25.62	25.62	TON
9/4/2018	113629WA	113629WA	574127	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.79	30.79	TON
9/4/2018	113629WA	113629WA	574124	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	32.86	32.86	TON
9/4/2018	113629WA	113629wa	574110	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	31.32	31.32	TON
9/4/2018	113629WA	113629wa	574100	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	34.37	34.37	TON
9/4/2018	113629WA	113629wa	574098	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	33.36	33.36	TON
9/4/2018	113629WA	113629WA	574072	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	28.82	28.82	TON
9/4/2018	113629WA	113629WA	574069	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	30.14	30.14	TON
9/4/2018	113629WA	113629wa	574043	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	29.99	29.99	TON
9/4/2018	113629WA	113629wa	574041	LF02 Hydraulic Fluid Impacted Soil and/or Debris Cleanup	Graham Road Landfill	34.13	34.13	TON
							1879.21	
Import								
9/4/2018							298.15	TON
9/5/2018							339.4	TON
9/6/2018							300.15	TON
9/7/2018							358.97	TON
							1296.67	

INVOICE



Spokane Environmental Solutions, LLC
 P.O. Box 540
 Colbert WA, 99005
 Phone (509) 688-5376

PLEASE REMIT CHECK PAYMENT TO:
 Spokane Environmental Solutions, LLC
 PO BOX 540
 Colbert, WA 99005

Spokane Environmental Solutions, LLC
 Inland Northwest Bank
 ABA# 125108104
 A/C# 41010422

Invoice Date: October 23, 2018

Customer: GeoEngineers, Inc.
523 E. Second Ave.
Spokane, WA 99202

Job Description: Avista Fleet Service Building Excavation

Job Location: Spokane, Washington

Invoice #: 0100-006-02
 SES Job #: 0100-006
 Customer PO #: _____

Contact: Joshua M. Lee
 Phone: 509-363-3125
 Fax: 509-363-3126
 Terms: per MSA

Job Date (s): Sep-Oct 2018

	CONTRACT AMOUNT	Quantity	Units	Unit Cost	Extended Price
1	Excavation and Loading	1902.65	Ton	\$ 4.00	\$ 7,610.60
2	Transportation for Disposal	0.00	Ton	\$ 9.00	\$ -
3	Disposal	0.00	Ton	\$ 40.50	\$ -
4	Placement and Compaction of Backfill	3018.59	Ton	\$ 7.00	\$ 21,130.13
5	Import Material	1712.92	Ton	\$ 14.50	\$ 24,837.34
Alt. 1	Place, Grade and Compact Liner Bedding	897.89	Ton	\$ 40.00	\$ 35,915.60
Alt. 2	Subcontract Liner	1.00	Lot	\$ 8,037.81	\$ 8,037.81
Alt. 3	Connect Liner Drain to existing Storm	1.00	LS	\$ 800.00	\$ 800.00
Alt. 4	Install 180N geotextile fabric over sand layer	10710.00	SF	\$ 0.20	\$ 2,142.00
Alt. 5	Cap Liner with 1.0' drain layer	0.00	Ton	\$ 46.00	\$ -
Alt. 6	Install 180N geotextile fabric over drain layer	10710.00	SF	\$ 0.20	\$ 2,142.00
CO1	Test Pit Activities	0.00	Lot	\$ 2,700.00	\$ -
CO2	Visible layer - construction fencing	1.00	Lot	\$ 1,121.95	\$ 1,121.95
Subtotal					\$ 103,737.43
Sales Tax 8.8%					\$ 9,128.89
Total					\$ 112,866.32


 Jeff Heeter

Direct Phone 509-279-5559
 Fax

FED ID #: 82-1501120
 WA CCB #SPOKAES832LR
 ID CCB #RCE-46695

A 1.5% per month finance charge will be assessed for all past due invoices to include the flat late fee amount.

JOB NUMBER:		JOB TYPE: Services		WEEK ENDING: 09/01/18									CUSTOMER:									PROJECT MANAGER:							
LABOR CHARGES		Hourly Rates			08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Hours			
Name	Position	Rate 1	Rate 2	Rate 3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	Rate 1	Rate 2	Rate 3	Weekly Total
Smith, Chris	PS	\$75.00	\$75.00	\$75.00																						0.0	0.0	0.0	\$0.00
Ishihara, Flavio	PS	\$75.00	\$75.00	\$75.00																						0.0	0.0	0.0	\$0.00
		\$0.00	\$0.00	\$0.00																						0.0	0.0	0.0	\$0.00
		\$0.00	\$0.00	\$0.00																						0.0	0.0	0.0	\$0.00
Per diem per person - Food				\$50.00																					0.0			\$0.00	
Per diem per person - Lodging				\$100.00																					0.0			\$0.00	
Weekly Total Labor Charges:																										\$0.00			
EQUIPMENT CHARGES				08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Quantity			Weekly Total	
Equipment Description	Billing Code	Comment	Rate	Unit	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity		
Excavator, 38,000 to 53,000 lb	5009		\$800.00	Day																						0	\$0.00		
Loader, up to 4 yds.	5015		\$550.00	Day																						0	\$0.00		
Truck, Gear, 1 ton	7012		\$150.00	Day																						0	\$0.00		
0			\$0.00	0																						0	\$0.00		
Weekly Total Equipment Charges:																										\$0.00			
MATERIAL CHARGES				08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Quantity			Weekly Total	
Material Description	Billing Code	Comment	Rate	Unit	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity		
0			\$0.00	0																							0	\$0.00	
0			\$0.00	0																							0	\$0.00	
Weekly Total Material Charges:																										\$0.00			
OUTSIDE SERVICES - Cost Plus 15%				08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Cost		15%	Weekly Total	
Service Description	Vendor Name			Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost		
Black Liner	ACF West			\$6,989.40																						\$6,989.40	1048.41	\$8,037.81	
Construction fence (visible liner	White Cap			\$975.61																						\$975.61	146.34	\$1,121.95	
																										0.00	\$0.00		
Weekly Total Outside Services:																										\$9,159.76			
TRANSPORTATION & DISPOSAL - Per Bid				08/26/18			08/27/18			08/28/18			08/29/18			08/30/18			08/31/18			09/01/18			Subtotal Bid		Weekly Total		
Service Description	Vendor Name			Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	Bid	
																											\$0.00		
																											\$0.00		
																											\$0.00		
Weekly Total Transportation & Disposal Charges:																										\$0.00			
Weekly Total Charges:																										\$9,159.76			

Project Manager's Approval: _____



8951 SE 76th Drive, Portland, OR 97206
503-771-5115 Fax: 503-771-1161



INVOICE

Invoice Number : 005781

Invoice Date : September 26, 2018

Sold To :

Ship To :

SPOKANE ENVIRONMENTAL SOLUTIONS
3810 E BOONE AVE, SUITE 101
SPOKANE, WA 99202

Spokane Environmental Solutions, Inc.
1411 E Mission Avenue
Spokane, WA 99202

F.O.B	P.O. Number	Ship Via	Terms	Ship Date	Phone Number	Ordered By
JOB SITE	Verbal Jeff	OUR TRUCK	Net 30	9/25/2018	(509) 688-5376	Jeff H.

ACF Project # 1809-22 Project Name : Avista Service Building

Quantity	Units	Description	Unit Price	Extended Price
10,710	SF	a. GSE 40 Mil LLDPE Black Liner	0.64	\$6,854.40
1	EACH	b. GSE 40 Mil LLDPE Pipe Boot	135.00	\$135.00

Reseller Permit: A39 4199 19

JOB # 0100-006
EQUIP # _____
ACCT CODE Material
APPROVED _____ DATE _____
ENTERED [Signature] DATE _____

Please Remit To : ACF West Construction Co., Inc.
8951 S.E. 76th Drive
Portland, OR 97206

	TOTAL	\$6,989.40
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**CONSTRUCTION & INDUSTRIAL
WHITE CAP**

HD Supply Construction Supply, Ltd.
501 W. Church Street, Orlando, FL 32805-2247

INVOICE

BRANCH ADDRESS
047 - SPOKANE
(509) 535-5223
3825 EAST TRENT AVE.
SPOKANE WA 99202
SPOKANE

INVOICE NUMBER
10009445139
INVOICE DATE
09/25/2018
CUSTOMER PO NUMBER
AVISTA

ENROLLMENT TOKEN: TTL LVX TTB

SOLD TO: 10000171175

SPOKANE ENVIRONMENTAL SOLUTIONS LLC
3810 EAST BOONE AVENUE
SUITE 101
SPOKANE WA 99202

TERRITORY:
SHIP TO: 10001466748

SPOKANE ENVIRONMENTAL SOLUTIONS LLC/YARD
3810 EAST BOONE AVENUE
SUITE 101
SPOKANE WA 99202

PLEASE REMIT PAYMENT TO:
HD SUPPLY CONSTRUCTION AND INDUSTRIAL - WHITE CAP P.O. BOX 6040 CYPRESS, CA 90630-0040

ORDER DATE	ORDER NO.	ORDERED BY	ACCOUNT MANAGER	TAKEN BY
09/25/2018	30122471	JEFF HEATER	MULLEN, JOSEPH J	HERBERT, ZACHARY
BRANCH	ACCT JOB NO.	TERMS	SHIP VIA / ROUTING	CUSTOMER JOB NO.
047	10001466748	NET 30 DAYS	5. WALK IN	SPOKANE

LINE	PART NUMBER	DESCRIPTION	QTY ORD	UNIT PRICE	QTY BKO	QTY SHP	EXTENDED PRICE	TAX AMT
1	104WBORG4100	4'X100' ORANGE WARNING BARRIER	30	29.89 RL	0	30	896.70	78.91

JOB # 0100-006
EQUIP # _____
ACCT CODE Safety
APPROVED _____ DATE _____
ENTERED SH DATE _____

The A.H. Harris team (along with their wholly-owned subsidiaries Kenseal Construction products and HarMac Rebar & Steel) and HD Supply White Cap have joined forces to serve you even better. Find out more at <https://www.whitecap.com/ahhcustomer>

THESE ITEMS ARE CONTROLLED BY THE U.S. GOVERNMENT AND AUTHORIZED FOR EXPORT ONLY TO THE COUNTRY OF ULTIMATE DESTINATION FOR USE BY THE ULTIMATE CONSIGNEE OR END-USER(S) HEREIN IDENTIFIED. THEY MAY NOT BE RESOLD, TRANSFERRED OR OTHERWISE DISPOSED OF TO ANY OTHER COUNTRY OR ANY PERSON OTHER THAN THE AUTHORIZED ULTIMATE CONSIGNEE OR END-USER(S), EITHER IN THEIR ORIGINAL FORM OR AFTER BEING INCORPORATED INTO OTHER ITEMS, WITHOUT FIRST OBTAINING APPROVAL FROM THE U.S. GOVERNMENT OR AS OTHERWISE AUTHORIZED BY U.S. LAW AND REGULATIONS.

For questions regarding this invoice please call 1-800-WHITECAP
(1-800-944-8322).

NO REFUNDS OR EXCHANGES ON NON STOCK MERCHANDISE
Visit http://whitecap.com/misc/terms_and_conditions.pdf to view complete terms and conditions.

TOTAL GROSS	896.70
TOTAL TAX	70.91
TOTAL SHIPPING AND HANDLING	0.00
TOTAL INVOICE	975.61

RECEIVED BY: _____ SIGNATURE COPY ON FILE

Please verify that the remit to address you are using agrees to the address shown at the top of this invoice.



P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 371531
Inv Date: 09/17/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

Interstate Concrete & Asphalt
P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 01717 ICA - Airway Heights PS&G									
09/17/18	2100 - COARSE SAND	32.09	TON						
09/17/18	2125 - FINE SAND	124.42	TON						
Total Invoice:		156.51							

Ticket number(s) shipped from plant 01717 - ICA - Airway Heights PS&G
*14107973 *14108010 *14108026 *14108028 *14108049

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Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 371531
Date: 09/17/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

if you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
P.O. Box 742347
Los Angeles, CA 90074

Please provide your email address below if you would like to start receiving your invoices via email



P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 372131
Inv Date: 09/18/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

Interstate Concrete & Asphalt
P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 01717 ICA - Airway Heights PS&G									
09/18/18	2125 - FINE SAND	308.69	TON						
Total Invoice:		308.69							
Ticket number(s) shipped from plant 01717 - ICA - Airway Heights PS&G									
*14108089	*14108099	*14108105	*14108113	*14108125	*14108138	*14108139	*14108152		
*14108155	*14301571								

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Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 372131
Date: 09/18/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
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Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 372646
Inv Date: 09/19/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

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P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 01719 ICA - Elk-SRP PS&G									
09/19/18	2125 - FINE SAND	190.30	TON						
Total Invoice:		190.30							

Ticket number(s) shipped from plant 01719 - ICA - Elk-SRP PS&G
*14301591 *14301593 *14301598 *14301599 *14301602 *14301603

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Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 372646
Date: 09/19/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
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Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 374490
Inv Date: 09/26/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

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Airway Heights, WA 99001
208-765-1144

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Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 01717 ICA - Airway Heights PS&G									
09/26/18	2125 - FINE SAND	122.29	TON						
Plant: 01719 ICA - Elk-SRP PS&G									
09/26/18	2125 - FINE SAND	120.10	TON						
Plant: 02717 ICA - Airway Heights UPS&G									
09/26/18	2323 - SELECT FILL	118.59	TON						
				Total Invoice:	360.98				

Ticket number(s) shipped from plant 01717 - ICA - Airway Heights PS&G
 *14108933 *14108940 *14108963 *14108968
 Ticket number(s) shipped from plant 01719 - ICA - Elk-SRP PS&G
 *14301735 *14301736 *14301750 *14301753
 Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G
 *14109018 *14109025 *14109045 *14109056

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Invoice Amount: 4,958.58

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 374490
Date: 09/26/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
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 Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 370016
Inv Date: 09/12/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

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P.O. Box 1929
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208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02717 ICA - Airway Heights UPS&G									
09/12/18	2323 - SELECT FILL	89.69	TON						
Total Invoice:		89.69							

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G
*14107644 *14107654 *14107659

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Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 370016
Date: 09/12/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
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Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 370276
Inv Date: 09/13/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

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P.O. Box 1929
Airway Heights, WA 99001
208-765-1144

suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02717 ICA - Airway Heights UPS&G									
09/13/18	2323 - SELECT FILL	276.50	TON						
Total Invoice:				276.50					

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G

*14107700	*14107703	*14107713	*14107732	*14107754	*14107773	*14107791	*14107801
*14107814							

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Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 370276
Date: 09/13/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
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Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 370515
Inv Date: 09/14/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

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Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02717 ICA - Airway Heights UPS&G									
09/14/18	2323 - SELECT FILL	188.64	TON						
Plant: 02719 ICA - Elk-ARP UPS&G									
09/14/18	2323 - SELECT FILL	58.83	TON						
Total Invoice:		247.47							

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G
 *14107853 *14107858 *14107861 *14107869 *14107873 *14107883
 Ticket number(s) shipped from plant 02719 - ICA - Elk-ARP UPS&G
 *14301501 *14301513

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Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 370515
Date: 09/14/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Duo Date: 10/10/18

If you have any questions about your invoice please call 208-765-1144

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Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 375090
Inv Date: 09/27/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

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P.O. Box 1929
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Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02702 ICA - Post Falls UPS&G									
09/27/18	2323 - SELECT FILL	29.95	TON						
Plant: 02717 ICA - Airway Heights UPS&G									
09/27/18	2323 - SELECT FILL	243.93	TON						
Total Invoice:		273.88							

Ticket number(s) shipped from plant 02702 - ICA - Post Falls UPS&G
*14211623

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G
*14109120 *14109144 *14109172 *14109206 *14109236 *14109244 *14109278 *14109294

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Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 375090
Date: 09/27/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 375718
Inv Date: 09/28/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
3810 E Boone Ave Suite 101
Spokane WA 99202

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P.O. Box 1929
Airway Heights, WA 99001
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suzanne@spokaneenvironmental.com

Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02717 ICA - Airway Heights UPS&G									
09/28/18	2323 - SELECT FILL	417.97	TON						
Total Invoice:		417.97							

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G

*14109360	*14109370	*14109387	*14109392	*14109423	*14109429	*14109454	*14109456
*14109483	*14109484	*14109510	*14109511	*14211806	*14301808		

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Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 375718
Date: 09/28/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 10/10/18

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 376121
Inv Date: 10/01/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
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Spokane WA 99202

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Airway Heights, WA 99001
208-765-1144

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Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02702 ICA - Post Falls UPS&G									
10/01/18	2323 - SELECT FILL	29.42	TON		0.00				
Plant: 02717 ICA - Airway Heights UPS&G									
10/01/18	2323 - SELECT FILL	269.33	TON		0.00				
Total Invoice:		298.75							

Ticket number(s) shipped from plant 02702 - ICA - Post Falls UPS&G
*14212008

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G
*14109556 *14109562 *14109569 *14109579 *14109584 *14109591 *14109593 *14109599
*14109600

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Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 376121
Date: 10/1/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 11/10/18

If you have any questions about your invoice please call 208-765-1144

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P.O. Box 742347
Los Angeles, CA 90074

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P.O. Box 1929
Airway Heights, WA 99001

Customer No: 49262
Invoice No: 376237
Inv Date: 10/02/18
Page: Page 1 of 1
Customer PO: AVISTA SERVICE BLDG
Customer Job: AVISTA

Spokane Environmental Solutions LLC
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Spokane WA 99202

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P.O. Box 1929
Airway Heights, WA 99001
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Delivered To: AVISTA SERVICE BLDG REMEDIATION

Date	Code - Material Description	QTY	UM	Unit Price	Haul QTY	Matl Total	Haul Total	Tax	Total
Plant: 02717 ICA - Airway Heights UPS&G									
10/02/18	2323 - SELECT FILL	29.92	TON						
Plant: 02719 ICA - Elk-ARP UPS&G									
10/02/18	2323 - SELECT FILL	28.52	TON						
Total Invoice:				58.44					

Ticket number(s) shipped from plant 02717 - ICA - Airway Heights UPS&G
*14109642
Ticket number(s) shipped from plant 02719 - ICA - Elk-ARP UPS&G
*14301858

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Finance Charges will be applied to any late invoices at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

Amount Paid: _____

Customer Name: Spokane Environmental Solutions LLC
Customer No: 49262
Invoice #: 376237
Date: 10/2/18
Customer Job: AVISTA
Customer PO: AVISTA SERVICE BLDG
Due Date: 11/10/18

If you have any questions about your invoice please call 208-765-1144

Remit Payment To: Interstate Concrete & Asphalt
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Los Angeles, CA 90074

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Non-Hazardous WAM Approval

Requested Management Facility: Graham Road Landfill

Profile Number: 113.75WA Waste Acceptance Expiration Date: 09/10/2019

Common Name: LF02-Hydraulic Fluid Impacted Soil and/o... WM Regulatory Volume Limit: _____ NA

APPROVAL DETAILS

Approval Decision: Approved Not Approved

Profile Renewal: Yes No

Management Method: Alternate Daily Cover (ADC)

Generator Name: Avista Corporation

Profile Expiration Date: 09/10/2019

Periodic Testing Due Date: _____ NA

Other Due Date: _____ NA (Specify) _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval:

Generator Conditions

- Shall not contain free liquids.
- Waste manifest or applicable shipping document must accompany load.
- The waste profile number must appear on the shipping papers.

Debris and all non-soil aspects must be <10% for acceptance as ADC.

WM Authorization Name: Donald Lavrinc Title: Waste Approval Manager

WM Authorization Signature: *Donald Lavrinc* Date: 09/10/2018

Agency Authorization (if Required): _____ Date: _____

