INTERIOR TEXACO (BUFFALO SERVICE CENTER) SITE CHARACTERIZATION FINAL REPORT DELTA JUNCTION, ALASKA

ADEC FILE NUMBER 120.26.001 UST FACILITY ID 0125

July 2017



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July 31, 2017

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ACRONYMS AND ABBREVIATIONS

°C	degree Centigrade
°F	degree Fahrenheit
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK	Alaska Method
bgs	below the ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CL	cleanup level
CoC	chain of custody
COPC	contaminant of potential concern
CSM	conceptual site model
DRO	diesel range organics
EPA	Environmental Protection Agency
GAC	granular activated carbon
GRO	gasoline range organics
IC	institutional controls
LOD	limit of detection
LOQ	limit of quantitation
mg/kg	milligram per kilogram
mg/L	milligram per liter
MTG	migration-to-groundwater
PAHs	polynuclear aromatic hydrocarbons
PID	photoionization detector
ppm	parts per million
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RP	Responsible Party
RRO	residual range organics
SGS	SGS North America, Inc.
VOC	volatile organic compound

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1.0 INTRODUCTION

This report summarizes field observations from our site characterization of the Interior Texaco (formerly known as Delta Texaco, Alaska Mechanical Fuel Services and as the Buffalo Service Center) regulated contaminated site on September 14 through September 16, 2016 (Figure 1). The Alaska Department of Environmental Conservation (ADEC) File number for the site is 120.26.001. The purpose of this assessment was to address data gaps and evaluate what is necessary to achieve site closure. To accomplish the objective, we assessed the extent of contaminated soils, sampled and tested the groundwater quality, and evaluated threats to human health and to the environment.

Our services are provided under our agreement with the former Property owner, CEM Leasing, Inc. The objectives of our effort included preparation of a revised work plan with extensive background information of the site, installation of a series of soil borings in the former source areas to evaluate the lateral and vertical extent of contamination, sample groundwater (if encountered), sample the Kelly's Country Inn water-supply well, and prepare this summary report.

On October 27, 2016, we submitted a draft report to our client and ADEC. On February 28, 2017, we received a final version of ADEC comments. On June 26, 2017, we met with Mr. John Carnahan and Mr. Eric Breitenberger to discuss the draft report and potential future work. This final report addresses the comments we have received on the draft report in both the June 2017 meeting and the February 2017 written comments.

1.1 **Project Objectives and Scope of Services**

Our objective was to characterize soil contamination and groundwater quality at the facility. Our scope of services included preparing our September 2, 2016, *Limited Site Characterization Work Plan* (Work Plan), traveling to Delta Junction to conduct the field activities listed below, and preparing this summary report. We proposed a total of 3 days of drilling and sampling. Our

scope also included sampling groundwater in the former source areas and sampling the Kelly's Country Inn water-supply well.

The Work Plan was approved by the ADEC's Project Manager, John Carnahan on September 9, 2016. In his letter dated September 12, 2016, Mr. Carnahan provided five comments, including the recommendation to adequately distribute soil borings to ensure sufficient characterization. Mr. Carnahan also provided comments on closure requirements "to help evaluate the potential for this field effort to provide sufficient information." These comments were addressed in the field and are explained in detail in the sections, below.

Due to the existing infrastructure of the site, it was not possible to complete a site characterization or investigation of the subsurface south of the current service station building. Active fuel islands and buried, in-service USTs restricted drilling in this area.

2.0 SITE DESCRIPTION AND BACKGROUND

The Property consists of a two-story building with an attached garage, tire shop, and fuel service islands south of the building. A thin, approximately 4-inch-thick layer of asphalt covers part of the site near the building. Prior to 1995, the fueling system consisted of three dispensing islands (at the northwest corner of the lot, and along the west and south side of the building), a pipe-loading rack (north of the building), and four 12,000-gallon underground storage tanks (USTs) (Figure 2). We understand the UST system was installed in 1971 and operated until 1995.

In 1995, four USTs, associated piping, and dispensing apparatus were taken out of service. UST removal was performed in accordance with the ADEC UST Regulations, 18 AAC 78, during the summer of 1995 by Inland Petro Services (formerly Soil Services, Inc.), of Fairbanks, Alaska. Shannon and Wilson personnel observed the UST removal and excavation, field-screened excavated soils, collected soil samples for analytical results, and prepared a final report. Approximately 150 cubic yards (cy) of contaminated soil were excavated.

CEM Leasing retained Shannon & Wilson to perform a series of targeted site characterization and remedial activities between 1997 and 2010. Details of the services can be found in the approved September 9, 2016 Interior Texaco (Buffalo Service Center) Limited Site Characterization Work Plan.

2.1 Contaminants of Potential Concern and Cleanup Levels

Contaminants of potential concern (COPCs) associated with the site are DRO, GRO, RRO, BTEX, PAHs, and VOCs.

To evaluate soil and sediment sample concentrations, we compared the analytical data to Tables B1 and B2 Method Two of 18 AAC 75.341 *Migration to Groundwater for the Under 40-Inch Zone*.

To evaluate groundwater sample concentrations, we compared the analytical data to Table C of 18 AAC 75.345 *Groundwater Cleanup Levels*.

We have included an updated conceptual site model (CSM) in Appendix A.

3.0 FIELD ACTIVITIES

This section summarizes field activities performed between September 14 and September 16, 2016. Shannon & Wilson's field scientist James Dutt arrived in Delta Junction on September 14. Sample Collection Logs and Field Notes are included in Appendix B, completed borelogs are included in Appendix C, and selected site photographs are included in Appendix D.

3.1 Site Observations

Upon arrival on site, we observed the presence of groundwater in the preexisting monitoring wells *MW-1* (at 28.9 feet below ground surface [bgs]), *MW-2* (at 33.3 feet bgs), and *MW-8* (33.4 feet bgs). Although we determined the presence of groundwater, we did not evaluate the amount of groundwater and could not determine if there was sufficient water in the existing monitoring wells to collect a sample for laboratory analysis. The groundwater gradient is generally to the northwest, sub-parallel to the Tanana River.

Over the span of three days, we advanced a total of eight borings to assess the lateral and vertical extent of hydrocarbon contamination both upgradient and downgradient of the former USTs and the western dispensing island. We also installed three temporary well points and collected water samples from the well points and from the Kelly's Country Inn well for laboratory analysis. Current infrastructure, including the current southern fuel-dispensing island, prevented investigation near the former southern pump island (Figure 2).

3.2 Deviations from Work Plan

We conducted our field services consistent with our approved Work Plan, dated September 2, 2016. The following are the deviations from our amended scope of services.

The Work Plan called for the water samples to be collected using a peristaltic pump. Due to the depth of water, we opted instead to collect the water samples using a Waterra[®] actuator pump.

3.3 Investigation-Derived Waste (IDW) Management

GeoTek generated soil cuttings and excess soil not selected for laboratory analysis. These solids were used to backfill the boring from which they originated. Excess potentially contaminated soils not used for backfill were placed in a 55-gallon drum, labeled, and stored on site for proper off-site disposal.

GeoTek decontaminated their drilling tools using high-pressure steam and contained their decontamination fluids. Sampling equipment coming in contact with soil was decontaminated prior to use and reuse. We treated decontamination fluids using our granulated activated carbon (GAC) filter. The treated water was disposed on site. We transported the spent GAC to Fairbanks to be disposed with spent GAC from other Shannon & Wilson projects.

Other IDW consisted of disposable sampling equipment (nitrile gloves, plastic bags) which was disposed at the Fairbanks landfill.

3.4 Sample Custody, Storage, and Transport

After sample collection, we wrapped the sample bottles in bubble wrap and placed them in hard plastic coolers with adequate quantities of frozen ice-substitute to maintain sample temperatures between 0 degrees Centigrade (°C) and 6 °C until the samples reached the laboratory, using packing material as necessary to prevent bottle breakage and adhere to hazardous materials transportation regulations. A "temperature blank" was packed with the samples in each cooler. Shannon & Wilson maintained custody of the samples until submitting them to the laboratory for analysis.

Shannon & Wilson field staff departed Delta Junction on September 16. Sample coolers were closed using signed custody seals prior to departure from Delta Junction.

The water and soil samples were delivered to the SGS North America (SGS) receiving office in Fairbanks with a requested "standard turnaround" (14 calendar days, Work Order No. 1168600). Water and soil samples were analyzed for gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), diesel-range organics (DRO), residual-range organics (RRO), and polynuclear aromatic hydrocarbons (PAHs), additionally a field duplicate pair of water samples were analyzed for volatile organic compounds (VOCs) in accordance with our approved Work Plan.

4.0 ANALYTICAL RESULTS

We compared analytical results of soil samples to cleanup levels (CLs) listed in Alaska's 18 AAC 75.340 Table B1, Method Two – *Migration to Groundwater*. We compared analytical results of water samples collected from the temporary well points to CLs listed in Alaska's 18 AAC 75.345 Table C – *Groundwater Cleanup Levels*. CLs are tabulated in Table 1 and Table 2 alongside the analytical results.

Summaries of the analytical results of the soil and water samples are presented in Tables 1 and 2, respectively. The complete analytical laboratory reports and ADEC data-review checklists are included in Appendix E.

Soil Boring Samples

Analytical results found to be above the ADEC migration-to-groundwater CLs include:

- GRO was detected in the sample B-4-2016(11.0') at a concentration of 3,400 ppm.
- DRO was detected in samples:
 - o *B-2-2016(6.0')* at a concentration of 10,400 mg/kg
 - *B-4-2016(11.0')* at a concentration of 9,550 mg/kg;
 - o *B-4-2016(35.0')* at a concentration of 487 mg/kg
 - o *B-5-2016(27.5')/B-1002* at a concentration of 805/600 mg/kg; and
 - *B-8-2016(37.0')* at a concentration of 557 mg/kg.
- Benzene, o-xylene, and p & m –xylenes were detected in the sample *B-4-2016(11.0')* at concentrations of 0.418, 726, and 1,080 mg/kg respectively.
- The PAH analytes 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were detected in the field duplicate pair *B-4-2016(11.0')/B-1001* at concentrations between 35.7 and 47.8 mg/kg.

Concentrations of the other analytes in soil samples were less than ADEC CLs and are summarized in Table 1.

4.1 Groundwater Samples

No analytes were detected above ADEC CLs in water samples collected from the temporary well points installed at boring locations where groundwater was encountered. In addition, no analytes were detected above ADEC CLs in the water samples collected from the Kelly's Country Inn well. The following analytes from the B-2 boring were detected below ADEC CLs:

- GRO was detected at estimated concentrations less than the laboratory's LOQ but greater than the laboratory's LOD in the field duplicate pair *B-2-2016/B-1004*.
- The PAH analytes benzo(a)pyrene, dibenzo(a,h)anthracene, and fluorene, were detected at estimated concentrations less than the laboratory's LOQ but greater than the laboratory's LOD in the field duplicate pair *B-2-2016/B-1004*.
- The PAH analytes 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were detected at concentrations greater than the laboratory's LOQ but less than the associated ADEC CLs in the field duplicate pair *B-2-2016/B-1004*.
- The VOC analyte 1,2-dichloroethane was detected at an estimated concentration less than the laboratory's LOQ but greater than the laboratory's LOD in the field duplicate sample *B-1003*.

Concentrations of the other analytes in the project groundwater samples were less than the laboratory's LOD (Table 2).

5.0 QUALITY ASSURANCE/QUALITY CONTROL

We reviewed the analytical results provided by SGS for laboratory QC samples and also conducted our own QA assessment for this project. We reviewed chain of custody (CoC) records and laboratory sample-receipt forms to check that we followed proper custody procedures, met sample-holding times, and kept samples properly chilled (between 0 °C and 6 °C) during shipping. Our QA-review procedures allow us to document accuracy and precision of the analytical data and check that the analyses were sufficiently sensitive to detect analytes at levels below regulatory standards.

For this report, we reviewed the soil and water data reported in SGS Work Order 1168600. The SGS laboratory report contained the case narrative, sample-receipt forms, analytical results and a copy of the CoC. Details regarding the results of our QA analyses are presented in the ADEC laboratory data-review checklist along with a copy of the original SGS laboratory report (Appendix E). Our review of the data reveals that some of the analytical samples experienced method and laboratory data-quality failures (surrogate recovery, a method blank detection, field duplicate relative percent difference (RPD) failures, etc.). None of the data-quality failures caused the data to be considered unusable. Analytical results that are considered affected by method and laboratory data-quality failures are flagged in Tables 1 and 2.

6.0 DISCUSSION AND RESPONSES

6.1 Discussion

In Mr. Carnahan's September 12, 2016 letter in response to the Work Plan, he included seven "general requirements for a closure request". Specifically:

- 1. The extent of hazardous substance contamination must be properly characterized.
- 2. The Responsible Party (RP) must demonstrate that contamination will not migrate and will not pose an unacceptable risk to human health and the environment.
- 3. Cleanup has been conducted to the extent practicable and potential exposure to remaining contaminant can be prevented through Institutional Controls (ICs).
- 4. Vapor intrusion risks have been addressed.
- 5. The groundwater beneath the site is not a current source of drinking water.
- 6. The groundwater contaminant plume is steady state or shrinking, and concentrations are decreasing.
- 7. Ultimately, the department must agree with a determination that residual contamination does not pose a current unacceptable risk to human health, safety or welfare, or to the environment and that future risk is mitigated through ICs.

Based on conversations, meetings, and written comments since the September 12, 2016 work plan, we have revised this section to determine a path forward to collect the missing information to request a site closure at a later date. However, for efficiency of review, we are still addressing each comment, below.

6.1.1 Response to ADEC Comment #1 - Characterization

We recognize a few key data gaps in the subsurface characterization, namely along the northern perimeter of the property. Results indicate contamination is limited to a zone above the perched water table. No analytes were detected above ADEC CLs in water samples collected from the temporary well points installed at boring locations where groundwater was encountered.

In addition, soil contamination appears to be limited to the area near the former USTs (Figure 2). Specifically, to consider the vertical extent of diesel contamination, we compared the analytical and field screening results from B-4 and B-5 borings. The B-4 boring log indicates diesel

contamination is limited to a zone between 10 and 36 feet bgs. Results from the B-5 boring log indicate diesel contamination is confined to a zone between 26 and 35 feet bgs.

The horizontal extent of diesel contamination is limited to the northern portion of the site. Data from the B-1, B-3, B-7, and B-6 borings indicate the absence of contamination above ADEC CLs.

Benzene was not detected above the ADEC CLs in any samples collected between 27 and 47 feet bgs.

The analytical results from boring B-2 appear to indicate a shallow, isolated occurrence of diesel contamination, concentrated at six feet bgs, which is likely not attributable to the former USTs.

6.1.2 Response to ADEC Comment #2 – Contaminant Migration

Twenty-one years have passed since the first subsurface sample. In 1995, investigation within the former western fuel island yielded the highest result for DRO being 180 mg/kg and for GRO was 4,900 mg/kg. In 2016, in the former western fuel island, the highest result for DRO was 1.19 mg/kg and for GRO was 26.7 mg/kg.

Within the former UST area, analytical results show the same order of magnitude for diesel contamination. In 1995, DRO at 11 feet bgs in the former UST area was 8,600 mg/kg and the highest result for GRO was 12,000 mg/kg. In 2016, the highest result in the former UST area at 11 feet bgs for DRO was 9,550 mg/kg and for GRO was 3,400 mg/kg.

Analytical results from the temporary well points indicate the contamination observed in 2000 samples MW-8 and MW-3 has not migrated. In 2016, analytical results indicate an absence of BTEX, diesel, and gasoline contamination in the groundwater.

6.1.3 Response to ADEC Comment #3 – Practicable Cleanup

Future excavation is not practicable for safety concerns and the risk of compromising the building's structural integrity.

The SVE system was installed to assist with the passive recovery of hydrocarbons. In addition, the zone of apparent contamination is several feet below ground surface. The exposure to remaining contaminants is therefore low because of the uncontaminated-soil and partial-asphalt cover.

6.1.4 Response to ADEC Comment #4 – Vapor Intrusion Risks

Through October 1999 and March 2000, we conducted interior-air monitoring at the convenience store, service garage, and tire repair room. Field-screening results from a PID ranged from 2 to 13 ppm. Analytical results from the indoor-air sampling indicated the presence of benzene at 0.98 ppm in October 1999 (see our November 19, 1999 *Corrective Action Summary Report*). Analytes were not detected in any of the other interior air analytical samples.

In January 2000, we requested indoor air sampling and analysis be discontinued based on the results of the previous field screening and testing (see our January 31, 2000 *Corrective Action Summary Report*). Our request was approved by Clint Adler of ADEC on March 17, 2000.

In 2009, we completed a vapor intrusion assessment and an ADEC Building Inventory and Indoor Air Sampling Questionnaire.

6.1.5 Response to ADEC Comment #5 – Drinking Water Source

Identified drinking water wells in the Delta Junction area are completed at depths ranging from 100 to 240 feet. However, evidence of a perched aquifer was discovered in near proximity to the Interior Texaco site. Perched groundwater was first encountered during drilling at Interior Texaco in 1997 at a depth of approximately 33 to 34 feet bgs. Our May 1998 *Interior Texaco Release Investigation Report* concluded that this water may be perched above a low-permeability horizon, may be ephemeral, and may be of limited extent. We discontinued drilling in both borings to avoid compromising the potential low-permeability horizon.

There is no evidence that perched groundwater is in contact with the deeper groundwater aquifer. The water-supply well at Kelly's Country Inn has been sampled eight times since 1997, with no fuel-related analytes (including EDB) detected above ADEC CLs.

In a 1962 report by Waller, R.M. and Tolen, D.A., *Data On Wells And Springs Along The Richardson Highway, Alaska*, boring logs for the on-site monitoring wells included the documentation of the presence of "hard packed" or "tightly packed" gravel in "silt and clay binder" above the water-bearing aquifer.

In the 2009 North Delta Tank Farm Groundwater Investigation Field Activities Report prepared on behalf of the US Army, similar conclusions and observations regarding the presence of a perched aquifer were made for the site less than half a mile south of the Interior Texaco site (near the intersection of the Richardson and Alaska Highways). In the borelog for boring *OP35B/MW-3*, dry silt with gravel was observed below an aquifer perched on an aquiclude of dense silty gravel. The borelog and 2009 report are available upon request.

Our 2016 observations reinforce our understanding of the hydrogeology of the area and are consistent with the previous findings and recommendations. During advancement of B-1-2016 and B-2-2016 borings, we observed moist red-brown to light gray silt at 45 and 47 feet bgs, respectively. Underlying the moist silt layer, we observed a dry, well-graded gravel with sand. These observations are consistent with the presence of a perched groundwater aquifer.

Based on our information, the migration-to-groundwater pathway is not complete at this site due to the presence of a low permeability soil zone (confining layer) near and below45 feet bgs. See logs of borings B-1-2016 and B-2-2016 in Appendix C for further details.

However, migration or leaching to groundwater is considered a complete transport mechanism (due to perched, shallow groundwater). Based on our conversations in our June 12, 2017 coordination meeting with ADEC, we understand we should address the perched aquifer as a viable groundwater medium.

6.1.6 Response to ADEC Comment #6 – Contaminant Plume

The installation of the passive ventilation system may be aiding in the attenuation of fuel contaminants in the soil but contamination above the water table remains. During the site investigation, we collected screening samples from the eight vent stack turbines by inserting the tip of the PID into the air in the closest proximity to the top of the turbines. Table 3 summarizes the results. The turbines were found to be still (not turning) during measurements, and the data collected ranged from less than 1 to 74.5 ppm.

6.1.7 Response to ADEC Comment #7 – Potential Risk to Human Health

While exposure to contaminated soil through incidental soil ingestion is currently limited by the asphalt surface at the site, it remains a potentially complete future exposure pathway for commercial, industrial, or construction workers excavating soil at the site. PAHs, which can be absorbed dermally, may be present in areas of contaminated soil, representing another potentially complete future exposure pathway to the same receptors. Soil contamination observed in the 2016 borings do not contain benzene except for in B-4 at 11.0 feet bgs (0.481J mg/kg) and B-5 at 27.5 feet bgs (0.00684J mg/kg). There were 14 analytical soil samples collected from the investigation; only two results revealed benzene detections.

6.2 Recommendations

We understand the property is an active contaminated site (ADEC File No. 120.26.001) and that any actions taken will require ADEC approval. We recommend additional soil characterization, installation and sampling of groundwater monitoring wells, and a VI assessment to fill the data gaps for a site closure request. We recommend the specifics and details of the additional characterization be included in a work plan, submitted to ADEC for review and comment.

7.0 LIMITATIONS

This report was prepared for the use of the CEM Leasing for evaluating remaining contamination at the Interior Texaco site in Delta Junction, Alaska. This work presents our professional judgment as to the conditions in the area. Conclusions and recommendations presented here are based on sampling and analyses we performed, along with a limited review of records and other data available to the public. They should not be construed as definite conclusions about spill-site or soil conditions in the area, and it is possible our tests may not represent the highest levels of contamination in the area. We have not performed an independent evaluation of the accuracy or completeness of third-party information, and shall not be responsible for errors or omissions contained in such information.

The results included in this report should be considered representative of the time and locations at which the sampling occurred. It was not the intent of our investigation to detect the presence of contaminants other than those for which laboratory analyses were performed. No conclusions can be drawn on the presence or absence of other contaminants. The observed levels of contamination may be dependent upon seasonal changes and the passage of time. Due to such changes, or others beyond our control, our observations and recommendations applicable to this site may need to be revised. If substantial time has elapsed between submission of this report and the start of activities or action based upon it, we recommend this report be reviewed to determine the applicability of the conclusions and recommendations considering the lapsed time or changed conditions.

This report was prepared for the exclusive use of CEM Leasing. All documents prepared by Shannon & Wilson are instruments of service with respect to the project for the sole use of CEM Leasing. Only CEM Leasing shall have the right to rely upon such documents. Such documents are not intended or represented to be suitable for reuse by CEM Leasing after the passage of time, on extensions of the project, or on any other project. Any such reuse without written verification or adaptation by Shannon & Wilson, as appropriate for the specific purpose intended, shall be at the user's sole risk. Copies of documents that may be relied upon by the CEM Leasing are limited to the printed copies (also known as hard copies) signed or sealed by Shannon & Wilson. Text, data, or graphics files in electronic media format are furnished solely for the convenience of CEM Leasing. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

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When transferring documents in electronic media format, Shannon & Wilson does not make any representations as to long-term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used for the document's creation.

Shannon & Wilson, Inc. has prepared the attachment, "*Important Information about your Environmental Site Assessment/Evaluation Report*" in Appendix F to assist you and others in understanding the uses and limitations of our reports.

8.0 REFERENCES

- Alaska Department of Environmental Conservation (ADEC), 2003, 18 AAC 75: Oil and other hazardous substances pollution control: Juneau, Alaska, available <u>http://dec.alaska.gov/commish/regulations/</u>.
- Alaska Department of Environmental Conservation (ADEC), 2008, 18 AAC 75.341 Tables B1 and B2, Method Two Soil Cleanup Level for Migration to Groundwater for the "Under 40 Inch Zone".
- Alaska Department of Environmental Conservation (ADEC), 2002, Method AK101: Juneau, Alaska, available <u>https://dec.alaska.gov/eh/docs/lab/CS/AK101.pdf</u>
- Alaska Department of Environmental Conservation (ADEC), 2016, Field Sampling Guidance for Contaminated Sites and Leaking Underground Storage Tank Sites, available: <u>https://dec.alaska.gov/spar/csp/guidance_forms/docs/Field%20Sampling%20Guidance%20-%20%20Final%2003%2021%202016.pdf</u>
- Alaska Department of Environmental Conservation (ADEC), 2009, Site characterization work plan and reporting guidance for investigation of contaminated sites: Juneau, Alaska, ADEC Division of Spill Prevention and Response, Contaminated Sites Program, 7 p., September, available: <u>http://dec.alaska.gov/spar/csp/guidance_forms/csguidance.htm</u>
- Alaska Department of Environmental Conservation (ADEC), 2010, Policy guidance on developing conceptual site models: Juneau, Alaska, ADEC Division of Spill Prevention and Response, Contaminated Sites Program, October, available: <u>http://dec.alaska.gov/spar/csp/guidance_forms/csguidance.htm</u>
- Alaska Department of Environmental Conservation (ADEC), 2014, Underground storage tanks procedures manual: Juneau, Alaska, ADEC Division of Spill Prevention and Response, Contaminated Sites Program, August, available: <u>http://dec.alaska.gov/spar/guidance.htm</u>

TABLE 1 ANALYTICAL RESULTS FOR SOIL SAMPLES

Analytical	Analyte	ADEC Soil Cleanup	Units	B-1- 2016(47.0')	B-2- 2016(6.0')	B-2- 2016(36.0')	B-2- 2016(47.5')	B-2- 2016(49.5')	B-3- 2016(33.0')	B-4- 2016(11.0')	B-1001	B-4- 2016(35.0')	B-5- 2016(27.5')	B-1002	B-6- 2016(36.0')	B-7- 2016(37.0')	B-8- 2016(37.0')
Method		Level †		PS	PS	PS	PS	PS	PS	PS	DUP	PS	PS	DUP	PS	PS	PS
	1-Methylnaphthalene	6.2	mg/kg							39.2	35.7						
	2-Methylnaphthalene	6.1	mg/kg							47.8	42.9						
	Acenaphthene	180	mg/kg							<0.156	<0.155						
	Acenaphthylene	180	mg/kg							<0.156	<0.155						
	Anthracene	3,000	mg/kg							0.578	0.506						
	Benzo(a)anthracene	3.6	mg/kg							<0.156	<0.155						
	Benzo(a)pyrene	2.1	mg/kg							<0.156	<0.155						
	Benzo(b)fluoranthene	12	mg/kg							<0.156	<0.155						
8270D SIM	Benzo(g,h,i)perylene	38,700	mg/kg							<0.156	<0.155						
(PAH)	Benzo(k)fluoranthene	120	mg/kg							<0.156	<0.155						
	Chrysene	360	mg/kg							<0.156	<0.155						
	Dibenzo(a,h)anthracene	4.0	mg/kg							<0.156	<0.155						
	Fluoranthene	1,400	mg/kg							<0.156	<0.155						
	Fluorene	220	mg/kg							2.40	2.17						
	Indeno(1,2,3-cd)pyrene	41	mg/kg							<0.156	<0.155						
	Naphthalene	20	mg/kg							40.4	36.7						
	Phenanthrene	3,000	mg/kg							2.23	2.08						
	Pyrene	1,000	mg/kg							0.109J	0.112J						
AK101	Gasoline Range Organics	300	mg/kg	10.6	61.4JH*	5.71JH*	38.3JH*	<3.07B*	3.19J	3,400JH*		2.77J	18.3JH*	17.4JH*	1.19J	1.81J	1.52J
AK102	Diesel Range Organics	250	mg/kg	<13.3	10,400	18.6J	56.5	11.9J	28.6	9,550		487	805	600	26.7	<10.7	557
AK103	Residual Range Organics	11,000	mg/kg	16.7J	258	14.6J	23.7J	18.3J	23.1	175		63.7JH*	20.4	<22.5B*	163	<10.7	46.0
SM21 2540G	Total Solids	N/A	%	74.4	79.0	92.5	74.6	76.4	93.0	79.7	79.7	95.8	96.9	97.2	95.4	93.5	96.4
	Benzene	0.025	mg/kg	<0.0150	<0.0103	<0.0136	<0.0160	<0.0104	0.00735J	0.418J		<0.00840	0.00684J	<0.00830	<0.00720	<0.00815	<0.00645
	Ethylbenzene	6.9	mg/kg	<0.0301	0.0136J	<0.0272	1.39	0.0732	<0.0184	1.01		<0.0168	0.0428	0.0419	<0.0144	<0.0164	<0.0129
SW8021B	o-Xylene	63*	mg/kg	<0.0601B*	1.63	<0.0543B*	1.83	0.138	0.159	726		0.154	0.271J*	0.159J*	<0.0340B*	<0.0327B*	<0.0432B*
	P & M -Xylene	63*	mg/kg	<0.120B*	0.485	<0.109B*	4.41	0.151JH*	0.253	1,080		0.251	0.388J*	<0.0678B*	<0.0725B*	<0.0653B*	<0.0671B*
	Toluene	6.5	mg/kg	0.0709	0.0149J	<0.0272	0.224	<0.0207	0.0246J	3.62		0.0137J	0.0185J	<0.0166	<0.0144	<0.0164	<0.0129

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Notes:

- ADEC = Alaska Department of Environmental Conservation
 - + = ADEC Soil-Cleanup Levels from 18 AAC 75.340 Table B1 & B2 Method Two Under 40 Inch Zone Migration to Groundwater
 - * = cleanup level for total xylenes is 63.0 mg/L
- mg/kg = milligrams per kilogram
- PS = project sample
- DUP = field-duplicate sample
- PAH = polynuclear aromatic hydrocarbon
 - -- = analysis not requested
 - < = analyte not detected; limit of detection (LOD) listed. Flag applied by the laboratory
- **bold** = Result exceeds the ADEC Soil-Cleanup Level
- J = Estimated concentration, detected greater than the detection limit (DL) and less than the limit of quantitation (LOQ). Flag applied by the laboratory.
- J* = Estimated concentration due to a field duplicate relative percent difference (RPD) failure. Flag applied by Shannon & Wilson, Inc.
- JH* = Estimated concentration, biased high, due to laboratory QC failures. Flag applied by Shannon & Wilson, Inc.
- B* = Non-detect result, no bias, due to trip or method blank detections. Flag applied by Shannon & Wilson, Inc.

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TABLE 2ANALYTICAL RESULTS FOR WATER SAMPLES

		ADEC		B-1-2016	KACI	B-1003	B-2-2016	B-1004	B-6-2016
Analytical Method	Analyte	Groundwater Cleanup Level†	Units	PS	PS	DUP of KACI	PS	DUP of B-2-2016	PS
	1-Methylnaphthalene	0.15	mg/L				0.000731	0.000796	
	2-Methylnaphthalene	0.15	mg/L				0.000279	0.000292	
	Acenaphthene	2.2	mg/L				<0.0000270	<0.0000256	
	Acenaphthylene	2.2	mg/L				<0.0000270	<0.0000256	
	Anthracene	11.0	mg/L				<0.0000270	<0.0000256	
	Benzo(a)anthracene	0.0012	mg/L				<0.0000539B*	<0.0000512B*	
	Benzo(a)pyrene	0.0002	mg/L				0.0000110J	0.0000104J	
	Benzo(b)fluoranthene	0.0012	mg/L				<0.0000270	<0.0000256	
	Benzo(g,h,i)perylene	1.1	mg/L				<0.0000270	<0.0000256	
8270D SIM (PAH)	Benzo(k)fluoranthene	0.012	mg/L				<0.0000270	<0.0000256	
	Chrysene	0.12	mg/L				<0.0000270	<0.0000256	
	Dibenzo(a,h)anthra- cene	0.00012	mg/L				0.0000119J	0.0000122J	
	Fluoranthene	1.5	mg/L				<0.0000539B* <0.0000512B*		
	Fluorene	1.5	mg/L				0.0000288J	<0.0000256	
	Indeno(1,2,3- cd)pyrene	0.0012	mg/L				<0.0000270	<0.0000256	
	Naphthalene	0.73	mg/L				0.000234	0.000236	
	Phenanthrene	11	mg/L				<0.0000539B*	<0.0000512B*	
	Pyrene	1.1	mg/L				<0.0000539B*	<0.0000512B*	
AK101	GRO	2.2	mg/L	<0.0500	<0.0500		0.0354J	0.0315J	<0.0500
AK102	DRO	1.5	mg/L	<0.566B*	<0.641B*		<1.11B*	<1.04B*	<0.688B*
AK103	RRO	1.1	mg/L	<0.236	<0.267		<0.265	<0.265	<0.286
	Benzene	0.005	mg/L	<0.000250	<0.000250		<0.000250	<0.000250	<0.000250
	Ethylbenzene	0.7	mg/L	<0.000500	<0.000500		<0.000500	<0.000500	<0.000500
SW8021B	o-Xylene	10.0*	mg/L	<0.000500	<0.000500		<0.000500	<0.000500	<0.000500
	P & M Xylene	10.0*	mg/L	<0.00100	<0.00100		<0.00100	<0.00100	<0.00100
	Toluene	1.0	mg/L	<0.000500			<0.000500	<0.000500	<0.000500
	1,1,1,2- Tetrachloroethane	-	mg/L		<0.000250	<0.000250			
	1,1,1-Trichloroethane	0.2	mg/L		<0.000500	<0.000500			
SW 8260B	1,1,2,2- Tetrachloroethane	0.0043	mg/L		<0.000250	<0.000250			
511 02000	1,1,2-Trichloroethane	0.005	mg/L		<0.000500	<0.000500			
	1,1-Dichloroethane	7.3	mg/L		<0.000500	<0.000500			
	1,1-Dichloroethene	0.007	mg/L		<0.000500	<0.000500			
	1,1-Dichloropropene	-	mg/L		<0.000500	<0.000500			

TABLE 2 ANALYTICAL RESULTS FOR WATER SAMPLES, CONTINUED

		ADEC		B-1-2016	KACI	B-1003	B-2-2016	B-1004	B-6-2016
Analytical Method	Analyte	Groundwater Cleanup Level†	Units	PS	PS	DUP of KACI	PS	DUP of B-2-2016	PS
	1,2,3- Trichlorobenzene	-	mg/L		<0.000500	<0.000500			
	1,2,3- Trichloropropane	0.00012	mg/L		<0.000500	<0.000500			
	1,2,4- Trichlorobenzene	0.07	mg/L		<0.000500	<0.000500			
	1,2,4- Trimethylbenzene	1.8	mg/L		<0.000500	<0.000500			
	1,2-Dibromo-3- chloropropane	-	mg/L		<0.00500	<0.00500			
	1,2-Dibromoethane	0.00005	mg/L		<0.000500	<0.000500			
	1,2-Dichlorobenzene	0.6	mg/L		<0.000500	<0.000500			
	1,2-Dichloroethane	0.005	mg/L		<0.000250J*	0.000290J*			
	1,2-Dichloropropane	0.005	mg/L		<0.000500	<0.000500			
	1,3,5- Trimethylbenzene	1.8	mg/L		<0.000500	<0.000500			
	1,3-Dichlorobenzene	3.3	mg/L		<0.000500	<0.000500			
	1,3-Dichloropropane	-	mg/L		<0.000250	<0.000250			
	1,4-Dichlorobenzene	0.075	mg/L		<0.000250	<0.000250			
SWR2COD	2,2-Dichloropropane	-	mg/L		<0.000500	<0.000500			
continued	2-Butanone(MEK)	22	mg/L		<0.00500	<0.00500			
	2-Chlorotoluene	-	mg/L		<0.000500	<0.000500			
	2-Hexanone	-	mg/L		<0.00500	<0.00500			
	4-Chlorotoluene	-	mg/L		<0.000500	<0.000500			
	4-Methyl-2 pentanone (MIBK)	2.9	mg/L		<0.00500	<0.00500			
	Benzene	0.005	mg/L			<0.000200			
	Bromobenzene	-	mg/L		<0.000500	<0.000500			
	Bromochloromethane	-	mg/L		<0.000500	<0.000500			
	Bromodichlorometha ne	0.014	mg/L		<0.000250	<0.000250			
	Bromoform	0.11	mg/L		<0.000500	<0.000500			
	Bromomethane	0.051	mg/L		<0.00500	<0.00500			
	Carbon disulfide	3.7	mg/L		<0.00500	<0.00500			
	Carbon tetrachloride	0.005	mg/L		<0.000500	<0.000500			
	Chlorobenzene	0.1	mg/L		<0.000250	<0.000250			
	Chloroethane	0.29	mg/L		<0.000500	<0.000500			
	Chloroform	0.14	mg/L		<0.000500	<0.000500			
	Chloromethane	0.066	mg/L		<0.000500	<0.000500			

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TABLE 2 ANALYTICAL RESULTS FOR WATER SAMPLES, CONTINUED

		ADEC		B-1-2016	KACI	B-1003	B-2-2016	B-1004	B-6-2016
Analytical Method	Analyte	Groundwater Cleanup Level†	Units	PS	PS	DUP of KACI	PS	DUP of B-2-2016	PS
	Chloroform	0.07	mg/L		<0.000500	<0.000500			
	Chloromethane	0.0085	mg/L		<0.000500	<0.000500			
	cis-1,2- Dichloroethene	0.01	mg/L		<0.000500	<0.000500			
	cis-1,3- Dichloropropene	0.37	mg/L		<0.000250	<0.000250			
	Dibromochlorometha ne	7.3	mg/L		<0.000250	<0.000250			
	Dibromomethane	0.7	mg/L		<0.000500	<0.000500			
	Dichlorodifluorometh ane	0.0073	mg/L		<0.000500	<0.000500			
	Ethylbenzene	3.7	mg/L			<0.000500			
	Hexachlorobutadiene	0.005	mg/L		<0.000500	<0.000500			
	Isopropylbenzene	0.47	mg/L		<0.000500	<0.000500			
	Methylene chloride	0.73	mg/L		<0.00250	<0.00250			
	Methyl-t-butyl ether	0.37	mg/L		<0.00500	<0.00500			
	Naphthalene	0.37	mg/L		<0.00500	<0.00500			
	n-Butylbenzene	10.0*	mg/L		<0.000500	<0.000500			
	n-Propylbenzene	10.0*	mg/L		<0.000500	<0.000500			
SW8260B	o-Xylene	-	mg/L			<0.000500			
continueu	P & M -Xylene	0.37	mg/L			<0.00100			
	p-Isopropyltoluene	0.1	mg/L		<0.000500	<0.000500			
	sec-Butylbenzene	0.37	mg/L		<0.000500	<0.000500			
	Styrene	0.005	mg/L		<0.000500	<0.000500			
	tert-Butylbenzene	1.0	mg/L		<0.000500	<0.000500			
	Tetrachloroethene	10	mg/L		<0.000500	<0.000500			
	Toluene	0.1	mg/L		<0.000500	<0.000500			
	Total Xylenes	0.0085	mg/L		<0.00150	<0.00150			
	trans-1,2- Dichloroethene	0.005	mg/L		<0.000500	<0.000500			
	trans-1,3- Dichloropropene	11	mg/L		<0.000500	<0.000500			
	Trichloroethene	1100	mg/L		<0.000500	<0.000500			
	Trichlorofluorometha ne	37	mg/L		<0.000500	<0.000500			
	Trichlorotrifluoroetha ne	0.002	mg/L		<0.00500	<0.00500			
	Vinyl acetate	37	mg/L		<0.00500	<0.00500			
	Vinyl chloride	0.002	mg/L		<0.000500	<0.000500			

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Note	s:
†	= ADEC Water-Cleanup Levels from 18 AAC 75.345 Table C Groundwater Cleanup Levels
*	= Cleanup level represents total xylenes
mg/L	= milligrams per liter
PS	= project sample
DUP	= field-duplicate sample
PAH	
-	
<	
bold	
J	
J*	
B*	

TABLE 2 ANALYTICAL RESULTS FOR WATER SAMPLES, CONTINUED

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Wind

Speed

10 mph

5 mph

5 mph

15 mph

2 mph

10 mph

1 mph

5 mph

5 mph

10 mph

5 mph

5 mph

15 mph

2 mph

10 mph

1 mph

5 mph

5 mph

10 mph

5 mph

5 mph

15 mph

2 mph

10 mph

1 mph

5 mph

5 mph

10 mph

5 mph

5 mph

15 mph

2 mph

10 mph

1 mph

5 mph

5 mph

PID

(ppm)

>2,000

450

130

1,324

579

1,207

350

2

74.5

742

440

100

133

413

369

395

<1

3.5

1,541

1,000

120

433

824

701

720

<1

<1

948

610

40

595

583

411

480

<1

1.4

Sample

Date

10/1/1999

10/23/1999

12/20/1999

3/29/2000

7/12/2000

10/4/2000

7/21/2001

10/1/2008

9/14/2016

10/1/1999

10/23/1999

12/20/1999

3/29/2000

7/12/2000

10/4/2000

7/21/2001

10/1/2008

9/14/2016

10/1/1999

10/23/1999

12/20/1999

3/29/2000

7/12/2000

10/4/2000

7/21/2001

10/1/2008

9/14/2016

10/1/1999

10/23/1999

12/20/1999

3/29/2000

7/12/2000

10/4/2000

7/21/2001

10/1/2008

9/14/2016

Sample Location	Stack Location	Sample Date	Wind Speed	PID (ppm)	Sample Location	Stack Location	
		10/1/1999	10 mph	366			
		10/23/1999	5 mph	220			
		12/20/1999	5 mph	0		West Side of Building near	
	West Side	3/29/2000	15 mph	463			
VS-1	near	7/12/2000	2 mph	183	VS-5		
	former fuel island	10/4/2000	10 mph	274		former	
		7/21/2001	1 mph	210			
		10/1/2008	5 mph	<1			
		9/14/2016	5 mph	9.8			
		10/1/1999	10 mph	660			
		10/23/1999	5 mph	520		North Side of Building near	
		12/20/1999	5 mph	70			
	Single Stack on	3/29/2000	15 mph	245			
VS-2	Stack on South Side of Building	7/12/2000	2 mph	476	VS-6		
		10/4/2000	10 mph	536		USTs	
	5	7/21/2001	1 mph	570			
		10/1/2008	5 mph	<1			
		9/14/2016	5 mph	2.4			
		10/1/1999	10 mph	1,918			
		10/23/1999	5 mph	1,300			
		12/20/1999	5 mph	1,150		North	
	West Side	3/29/2000	15 mph	1,268		Side of	
VS-3	near	7/12/2000	2 mph	998	VS-7	Building near	
	former fuel island	10/4/2000	10 mph	1,098		Former	
		7/21/2001	1 mph	1,120		0315	
		10/1/2008	5 mph	5			
		9/14/2016	5 mph	13.2			
		10/1/1999	10 mph	2,000			
		10/23/1999	5 mph	700			
		12/20/1999	5 mph	30		North	
	West Side	3/29/2000	15 mph	2,000		Side of	
VS-4	near	7/12/2000	2 mph	898	VS-8	Building near	
	former fuel island	10/4/2000	10 mph	1,538		Former	
		7/21/2001	1 mph	1,300		0318	
		10/1/2008	5 mph	<1			
		9/14/2016	5 mph	38.4			

 TABLE 3

 RESULTS FOR TURBINE VENT STACK SAMPLING

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COMPRENSIVE TO-DATE CHARACTERIZATION

July 2017

31-1-11809-006

SHANNON & WILSON, INC. Figure 3

APPENDIX A

CONCEPTUAL SITE MODEL (CSM)

- Human Health CSM Graphic Form
- Human Health CSM Scoping Form

Sediment Resuspension, runoff, or erosion <u>check surface water</u> Uptake by plants or animals <u>check biota</u> Other (list):	Direct release to sediment check sediment	Surface Volatilization check air Water Sedimentation check sediment Uptake by plants or animals check biota Other (list):	Uptake by plants or animals check biota Other (list): Direct release to surface water check surface water	Direct release to groundwater check groundwater Ground- Volatilization Volatilization Flow to surface water body Check surface water Flow to sediment Flow to sediment	✓ Direct release to subsurface soil check soil Subsurface Migration to groundwater check groundwater Soil ✓ Volatilization check air (2-15 ft bgs) Uptake by plants or animals check biote Other (list): Other (list): Image: state sta	(0-2 ft bgs) ✓ Volatilization Check air ○ Runoff or erosion Check surface water ○ Uptake by plants or animals Check bota ○ Other (list): Check bota	Media Transport Mechanisms Migration to subsurface <u>check soli</u> Soil Migration to groundwater <u>check going</u>	(1) (2) Check the media that For each medium identified in (1), follow the could be directly affected top arrow <u>and</u> check possible transport methanisms. Check additional media under the transport of the transformed on the transformed and the transformed on transformed on the transformed on the	<i>Site:</i> Interior Texaco, ADEC File No. 120.26.001 Delta Junction, Alaska <i>Completed By:</i> Valerie Webb, CPG
biota Ingestion of Wild or Farmed Foods	sediment Direct Contact with Sediment	surface water Dermal Absorption of Contaminants in Surface Water	Inhalation of Fugitive Dust Ingestion of Surface Water	 ✓ Inhalation of Outdoor Air ✓ Inhalation of Indoor Air 	groundwater	Incidental Soil Ingestion Incidental Absorption of Contaminants from Soil Inhalation of Fugitive Dust	posure Media Exposure Pathway/Route	(3) (4) eck all exposure dia identified in (2). <u>Agree with Sections 2 and 3 of the Human</u>	Instructions: Follow the numbered consider contaminant concentratic use controls when describing path
				C/F C/F C/F C/F C/F C/F I		Res. (adu adu site or n Con ind Site or n Con Con Con Con Con Con Con Con Con Co	idents Ilts or children) Intercial or Ustrial Workers P visitors, trespasses ecreational users Distruction workers mers or subsistence vesters Sistence consumers ler	Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "P" for future receptors, "C/P" for both current and future receptors, or "I" for insignificant exposure. Current & Future Receptors	1 directions below. Do not ons or engineering/land hways.

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Revised, 10/01/2010

Human Health Conceptual Site Model Scoping Form

Site Name:	Interior Texaco, Delta Junction, Alaska
File Number:	ADEC File No. 120.26.001
Completed by:	Valerie Webb, CPG

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, a CSM graphic and text must be submitted with the site characterization work plan.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources (check potential sources at the site)

\checkmark	USTs		Vehicles						
	ASTs		Landfills						
✓	Dispensers/fuel loading racks		Transformers						
	Drums		Other:						
Release Mechanisms (check potential release mechanisms at the site)									
\checkmark	Spills		Direct discharge						
\checkmark	Leaks		Burning						
			Other:						
Imj	pacted Media (check potentially-impacted medi	a at	the site)						
\checkmark	Surface soil (0-2 feet bgs [*])	\checkmark	Groundwater						
\checkmark	Subsurface Soil (>2 feet bgs)		Surface water						
\checkmark	Air		Other:						
Rec	ceptors (check receptors that could be affected b	у со	ntamination at the site)						
	Residents (adult or child)	\checkmark	Site visitor						
\checkmark	Commercial or industrial worker	\checkmark	Trespasser						
\checkmark	Construction worker		Recreational user						
	Subsistence harvester (i.e., gathers wild foods)		Farmer						
	Subsistence consumer (i.e., eats wild foods)		Other:						

1

^{*} bgs – below ground surface

2. **Exposure Pathways:** (The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)

a)	Direct Contact – 1 Incidental Soil Ingestion		
	Is soil contaminated anywhere between 0 a	nd 15 feet bgs?	\checkmark
	Do people use the site or is there a chance they will use the site in the future?		\checkmark
	If both boxes are checked, label this pathw	ay complete:complete	
	2 Dermal Absorption of Contaminants from Soil		
	Is soil contaminated anywhere between 0 and 15 feet bgs?		\checkmark
	Do people use the site or is there a chance they will use the site in the future?		\checkmark
	Can the soil contaminants permeate the skin? (Contaminants listed below, or within the groups listed below, should be evaluated for dermal absorption). Arsenic Lindane		
	Cadmium Chlordane 2,4-dichlorophenoxyacetic acid Dioxins DDT	PAHs Pentachlorophenol PCBs SVOCs	
	If all of the boxes are checked, label this pathway complete:		
b)	Ingestion – 1 Ingestion of Groundwater		
	Have contaminants been detected or are they expected to be detected in the groundwater, OR are contaminants expected to migrate to groundwater in the future?		\checkmark
	Could the potentially affected groundwater be used as a current or future drinking water source? <i>Please note, only leave the box unchecked if ADEC has determined the groundwater is not a currently or reasonably expected</i>		

If both the boxes are checked, label this pathway complete:

future source of drinking water according to 18 AAC 75.350.

2 Ingestion of Surface Water

	Have contaminants been detected or are they expected to be detected in surface water OR are contaminants expected to migrate to surface water in the future?	
	Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? <i>Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).</i>	
	If both boxes are checked, label this pathway complete:	
	3 Ingestion of Wild Foods	
	Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild food?	
	Do the site contaminants have the potential to bioaccumulate (<i>see</i> Appendix A)?	
	Are site contaminants located where they would have the potential to be taken up into biota? (i.e. the top 6 feet of soil, in groundwater that could be connected to surface water, etc.)	
	If all of the boxes are checked, label this pathway complete:	
c)	Inhalation 1 Inhalation of Outdoor Air	
	Is soil contaminated anywhere between 0 and 15 feet bgs?	\checkmark
	Do people use the site or is there a chance they will use the site in the future?	\checkmark
	Are the contaminants in soil volatile (See Appendix B)?	\checkmark
	If all of the boxes are checked, label this pathway complete:	
	2 Inhalation of Indoor Air	
	Are occupied buildings on the site or reasonably expected to be placed on the site in an area that could be affected by contaminant vapors? (i.e., within 100 feet, horizontally or vertically, of the contaminated soil or groundwater, <u>or</u> subject to "preferential pathways" that promote easy airflow, like utility conduits or rock fractures)	\checkmark
	Are volatile compounds present in soil or groundwater (See Appendix C)?	\checkmark
	If both boxes are checked, label this pathway complete:	

3. Additional Exposure Pathways: (Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)

Dermal Exposure to Contaminants in Groundwater and Surface Water

Exposure from this pathway may need to be assessed only in cases where DEC waterquality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- o Climate permits recreational use of waters for swimming,
- Climate permits exposure to groundwater during activities, such as construction, without protective clothing, or
- o Groundwater or surface water is used for household purposes.

Check the box if further evaluation of this pathway is needed:

Comments:

Inhalation of Volatile Compounds in Household Water

Exposure from this pathway may need to be assessed only in cases where DEC waterquality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- The contaminated water is used for household purposes such as showering, laundering, and dish washing, and
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix B)

Check the box if further evaluation of this pathway is needed:

Comments:

Inhalation of Fugitive Dust

Generally DEC soil ingestion cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway, although this is not true in the case of chromium. Examples of conditions that may warrant further investigation include:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers. This size can be inhaled and would be of concern for determining if this pathway is complete.

Check the box if further evaluation of this pathway is needed:

Comments:

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during recreational or some types of subsistence activities. People then incidentally **ingest** sediment from normal hand-to-mouth activities. In addition, **dermal absorption of contaminants** may be of concern if people come in contact with sediment and the contaminants are able to permeate the skin (see dermal exposure to soil section). This type of exposure is rare but it should be investigated if:

- Climate permits recreational activities around sediment, and/or
- Community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

ADEC soil ingestion cleanup levels are protective of direct contact with sediment. If they are determined to be over-protective for sediment exposure at a particular site, other screening levels could be adopted or developed.

Check the box if further evaluation of this pathway is needed:

Comments:

4. Other Comments (Provide other comments as necessary to support the information provided in this form)

information provided in this form.)

The mobility of contamination from soil at the site is limited by a number of factors. The soils are very dense, and at some depths, fine-grained; these low-permeability soils reduce vapor migration both horizontally and vertically. Volatization to outdoor air is further limited by the presence of asphalt pavement over much of the source-area soils. However, volatization to outdoor and indoor air cannot be completely ruled out; air should be considered a potential exposure medium for the site.

Leaching or subsurface migration downward to the deep (80 feet to 100 feet bgs) groundwater aquifer is limited by a confining layer. Shallow, perched groundwater has been identified in previous site work, in the vapor extraction wells, and samples of the perched groundwater collected in 1999 and 2000 contained fuel contamination above ADEC Table C groundwater cleanup levels. However, we observed perched groundwater only intermittently, often in insufficient quantities to collect samples. There is no evidence that perched groundwater is in contact with the deeper groundwater aquifer; the nearby water-supply well at Kelly's Country Inn has been sampled eight times since 1997, with no fuel-related analytes (including EDB) detected above PQLs. Therefore, while migration or leaching to groundwater is considered a complete transport mechanism (due to perched, shallow groundwater), we do not consider groundwater to be an exposure medium for this site.

A number of exposure pathways to contaminated soil or air (the identified exposure media) remain potentially complete for the site. These exposure pathways are described below. Human receptors are primarily commercial or industrial workers (including fueling-station staff) and site visitors (including customers), trespassers, or recreational users. Potential future receptors include construction workers. There are currently no residences within 100 feet of the site, and the Inn and the fueling station do not have permanent occupants. Also, there is no farming or subsistence harvesting taking place within at least 500 feet of the site. While exposure to contaminated soil through incidental soil ingestion is currently limited by the asphalt surface at the site, it remains a potentially complete future exposure pathway for commercial, industrial, or construction workers excavating soil at the site (e.g. if the current USTs and pump island were removed or upgraded). PAHs, which can be absorbed dermally, may be present in areas of contaminated soil, representing another potentially complete future exposure pathway to the same receptors.

Potential exposure pathways are visually represented in the CSM graphic. We did not evaluate potential risks to ecological receptors.

APPENDIX A

BIOACCUMULATIVE COMPOUNDS

Table A-1: List of Compounds of Potential Concern for Bioaccumulation

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table X of 18 AAC 75.345 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greater than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are

listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient (K_{ow}) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF

using the K_{ow} and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at http://www.pbtprofiler.net/. For compounds not found in the PBT Profiler,

DEC recommends using a log K_{ow} greater than 3.5 to determine if a compound is bioaccumulative.
APPENDIX B

VOLATILE COMPOUNDS

Table B-1: List of Volatile Compounds of Potential Concern

Common volatile contaminants of concern at contaminated sites. A chemical is defined as volatile if the Henry's Law constant is 1×10^{-5} atm-m³/mol or greater and the molecular weight less than 200 g/mole (g/mole; EPA 2004a). Those compounds in Table X of 18 AAC 75.345 that are volatile, based on the definition above, are listed below.

Acenaphthene	1,4-dichlorobenzene	Pyrene
Acetone	1,1-dichloroethane	Styrene
Anthracene	1,2-dichloroethane	1,1,2,2-tetrachloroethane
Benzene	1,1-dichloroethylene	Tetrachloroethylene
Bis(2-chlorethyl)ether	Cis-1,2-dichloroethylene	Toluene
Bromodichloromethane	Trans-1,2-dichloroethylene	1,2,4-trichlorobenzene
Carbon disulfide	1,2-dichloropropane	1,1,1-trichloroethane
Carbon tetrachloride	1,3-dichloropropane	1,1,2-trichloroethane
Chlorobenzene	Ethylbenzene	Trichloroethylene
Chlorodibromomethane	Fluorene	Vinyl acetate
Chloroform	Methyl bromide	Vinyl chloride
2-chlorophenol	Methylene chloride	Xylenes
Cyanide	Naphthalene	GRO
1,2-dichlorobenzene	Nitrobenzene	DRO

APPENDIX C

COMPOUNDS OF CONCERN FOR VAPOR MIGRATION

Table C-1: List of Compounds of Potential Concern for the Vapor Migration

A chemical is considered sufficiently toxic if the vapor concentration of the pure component poses an incremental lifetime cancer risk greater than 10-6 or a non-cancer hazard index greater than 1. A chemical is considered sufficiently volatile if it's Henry's Law constant is 1×10^{-5} atm-m³/mol or greater

is constacted sufficiently volution		
Acenaphthene	Dibenzofuran	Hexachlorobenzene
Acetaldehyde	1,2-Dibromo-3-chloropropane	Hexachlorocyclopentadiene
Acetone	1,2-Dibromoethane (EDB)	Hexachloroethane
Acetonitrile	1,3-Dichlorobenzene	Hexane
Acetophenone	1,2-Dichlorobenzene	Hydrogen cyanide
Acrolein	1,4-Dichlorobenzene	Isobutanol
Acrylonitrile	2-Nitropropane	Mercury (elemental)
Aldrin	N-Nitroso-di-n-butylamine	Methacrylonitrile
alpha-HCH (alpha-BHC)	n-Propylbenzene	Methoxychlor
Benzaldehyde	o-Nitrotoluene	Methyl acetate
Benzene	o-Xylene	Methyl acrylate
Benzo(b)fluoranthene	p-Xylene	Methyl bromide
Benzylchloride	Pyrene	Methyl chloride chloromethane)
beta-Chloronaphthalene	sec-Butylbenzene	Methylcyclohexane
Biphenyl	Styrene	Methylene bromide
Bis(2-chloroethyl)ether	tert-Butylbenzene	Methylene chloride
Bis(2-chloroisopropyl)ether	1,1,1,2-Tetrachloroethane	Methylethylketone (2-butanone)
Bis(chloromethyl)ether	1,1,2,2-Tetrachloroethane	Methylisobutylketone
Bromodichloromethane	Tetrachloroethylene	Methylmethacrylate
Bromoform	Dichlorodifluoromethane	2-Methylnaphthalene
1,3-Butadiene	1,1-Dichloroethane	MTBE
Carbon disulfide	1,2-Dichloroethane	m-Xylene
Carbon tetrachloride	1,1-Dichloroethylene	Naphthalene
Chlordane	1,2-Dichloropropane	n-Butylbenzene
2-Chloro-1,3-butadiene	1,3-Dichloropropene	Nitrobenzene
(chloroprene)		
Chlorobenzene	Dieldrin	Toluene
1-Chlorobutane	Endosulfan	trans-1,2-Dichloroethylene
Chlorodibromomethane	Epichlorohydrin	1,1,2-Trichloro-1,2,2-
		trifluoroethane
Chlorodifluoromethane	Ethyl ether	1,2,4-Trichlorobenzene
Chloroethane (ethyl	Ethylacetate	1,1,2-Trichloroethane
chloride)		
Chloroform	Ethylbenzene	1,1,1-Trichloroethane
2-Chlorophenol	Ethylene oxide	Trichloroethylene
2-Chloropropane	Ethylmethacrylate	Trichlorofluoromethane
Chrysene	Fluorene	1,2,3-Trichloropropane
cis-1,2-Dichloroethylene	Furan	1,2,4-Trimethylbenzene
Crotonaldehyde (2-butenal)	Gamma-HCH (Lindane)	1,3,5-Trimethylbenzene
Cumene	Heptachlor	Vinyl acetate
DDE	Hexachloro-1.3-butadiene	Vinvl chloride (chloroethene)

Source: EPA 2002.

APPENDIX B

SAMPLE COLLECTION LOGS AND FIELD NOTES

roject Number: 3/-/-1/809-003	Location: INTERIOR TEXACO								Page / of /
ampler 15-16	1tt								
		Sample	Depth	Interval (ft)	Matri	x Sampling	Samp	le PID	
ample Number	Location	Time	top	bottom	Type	Method	Type	Readi	ng Analyses
B-3-2016(33.0')	Baring B-3-2016	12:40	33.0	1	SB	7	ES	Ø	GRO/GTEX, DRO/RRO
B-4-2016 (110)	Boking B-4-2016	13:20	11.0	1	58	1	G	526	- GROBTEX, PAH, DRO/RAO
B-1001		1350	11.0	X	SB	1	J	1	PAH (Dup. of B-4-2016 (N.
B-4-2016 (35,0')	+	14:40	35.0	1	SB	7	ES	19	(AC/DTEX, PAH, DRO/RAD
B-5-20(6 (27.5')	Baring B-5-2016	16:25	27.5'	1	35	7	NT N	243	GRO/BTEX, DRO/RRO
3-1002	11	16:50	27.5'	I	SB	1	7	1	GAO/BITEX, DAO/ARO *
KACI(9-15-16)	Kelly's Alasta Country Inn	18:15	NA	1	Gu	9	5	w	* Dep. 05 B-5-2016(27.5")
1	Public well								X
R.									Vac (AOBTEX, DRO/RAO
B-1003	V	54:81	1	1	Gu	9	FD	th .	Vods -Dup of
		1.			1				KACI (9-15-16)
B-2-2016(9-15-16)	Bring 0-2-2016 Through SP.16	19:16	1	١	Gh	Water Bro	S	NA	+ (ACOLOTEX, PAH, BAC/ARO
B-1004	. 4	19:40	1	1	Bu	11	FD	MA	111
0 1 2 - 11 - 1 1	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		1						WP. of 13-2-2016(9-15-16)
2-1-20101-12-10) boring 19-1-1016-190000 34-16	20:00	1	(Gu	Watertones	ES	NA	- LASISTEY, PRO/RRO
						T			
			Mat	trix Type	Samp	ling Method	Sam	ple Type	
			AR	Air		Bailer/Coliwa	5	Environm	ental sample
			PR	Product	ດເ	Grab samplin	8 8 8	Field blan	nt rinsate
			SB	Subsurf, soil	п	Hand auger	Ð	Field dupl	licate
			S R	Sludge	סר	Tube liner Pump (liquid)	FR FR	Field mea	surement
			SS	Sunface soil	s s	Split spoon	MD	Matrix spi	ke duplicate
			WR	Water	< -	Vacuum (gas	TB	Trip blank	
					W	Wipe samplin	9		

SHANNON & WILSON, INC.

CAMPLE COLLECTION LOG

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			Wipe sampling	W					
	Trip blank	TB	Vacuum (gas)	<	Water	WR			
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uplicate	Matrix spike d	MD	Split spoon	SS	Surface soil	SS			
	Field replicate	8	Pump (liquid)		Sludge	3 8			
e mont	Field measure	FD	Hand auger	- 1	Subsurf. soil				
	Field blank	FB	Grab sampling	G	Product	PR			
sate	Equipment rins	贸	Drill outtings	D	Groundwater	GW			
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GRO/GTEX, ORO/RRO	0	T	1	SB	1	38	11:40	(36') BORING B-6-206	3-6-2016
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13-2-2016 (20)	Boring B-2-2016	15:25 6,0	Soil	1 257	1
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(524)9105-5-0		18:00 47.5	Soil	74.2	
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		Matrix Type	Sampling Method	Sample Type	
		AR Air	B Bailer/Coliwas	ES Environmenta	I sample
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		SB Subsurf, soil	H Hand auger	FD Field duplicat	10
		SG Sludge	P Pump (liquid)	FR Field replicate	anen
		SVV Surface soil	T Shelhu tihe	MD Matrix spike o	tuplicate
		WR Water	V Vacuum (gas)	TB Trip blank	
			W Wipe sampling		

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MONITORING WELL SAMPLING LOG

Owner-Client	KELLEYS	ALASKA	COUN	TRY II	rn			
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Weather JOS OURSELVENT Date 9-15-1 Sampling Personne JO Diameter & Type of Casing C/1551 Sample No. KALT (9-15-14) Time K215 Time Started 17:745 Duplicate B-1003 Time K215 Time Completed 18:30 Measuring Point [MP] MP Elevation Height of MP [Above] [Below] Land Surface MP Elevation Height of MP [Above] [Below] Land Surface Water Level Elevation Total Depth of Well Below MP Depth to Water Below MP Peter of Water in Well Pumping Start 17:747 Gallons per foot Gallons Pumped Packer set at feet below MP Purge Water JOC Gal Ice at feet below MP Purge Water JOC Gal Time Temp [°C] cm] Gallons per foot Gallons Pumped Packer set at feet below MP Purge Water JOC Gal Feet of Vater in Well Ice at feet below MP Purge Water JOC Gal Feet of Vater in Well Gallons pumped Time Time [PC] cm] Im Quitative Vater JOC Gal Feet of Vater in Well Feet of Vater in Well	Location	INTERIOR	C TEX	ACO		Page	1	
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SHANNON & WILSON, INC

SITE SAFETY & HEALTH PLAN PERSONAL ACKNOWLEDGEMENT FORM

Interior Texaco Limited Site Characterization Delta Junction, Alaska

I have reviewed this document and understand its contents and requirements. A copy of the above-referenced document has been made available to me. I agree to abide by the requirements of this Site Safety & Health Plan.

Signature Date

Name (printed)

Representing

31-1-11809-002

F083-Kit_Request_and_COC_Templates-Blank Revised 2013-03-24 http://www.sqs.com/terms-and-conditions

[] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

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Nº 303

INTERIOR TEXACO 31-1-11809-003

9-14-16 70 9-16-16

31-1-11809-003 12 31-1-11809-003 1 9-14-16 (Cont'D) 403-503- P. Sunny 8-14-16 1440: Mob To Borns 0600 - Travel FAI TO Detta Justion - Downgradient B-2-2016 0300-ON-STRE **GF** - meet w/ Val (Sta) # 1508: Begin Drilling SEE FIED LOG OF BORING GeoTek Alaska (Mich) -Drilled Q- SOFT 0830 - Site halk over w/ Val 695 9P - 5014 5AM 7455 & onners/Chant (FP) B-2-2016 (60) @ 1525 B-2-2016 (35.0) @ 1650 WL CHECK 08:40 - DTW 33.3 From TOC MW-2 Dry B-2-2016 (47.5) @ 18:00 B-2-2016 (49.5)@ 1810 11 [m-1/0-4] Dry 03:45 - DTW 28.9' 1, [mn.6/8-3] Dry 0850 DTM 33,4' 1700: SP-16 System placed tor 0950: Calibrate PID # 1 Collection of Gut Sampling 1/30: WIND TURBINE VENT STACKS 1000: Set up on Boring -USED 21D TO Take samples @ B-1-2016 - upgradient - SEE FIELD LOG OF BORING -parts - Note: None at the 8 Turbines were - Onled Q-50 FT 865 - Note: Contining Layer = 47 bgs maing despite 5-10 more winds GN @ 34 bgs to 13:35 VENT STACK PID READING 50; / Sample collected @ 17.0' 3-4/mw-1 B-1-2016(47.0') @ 13:35 9.8 Pm 14:20 SP-16 system used to collect MW-2 2.4 pm H-132 pm Gw Sample From this location MW-3 Rite in the Rain

31-1-11809-003 13 31-1-11809-003 14 9-15-16 9-14-16 (Cont'd) 0700: ON-SITE - 403; CHERCAST ΞD VENT STACK 38.4 APM MW-4 0715: Calibrated PIO #1 MW-5 74.5 PPM B-3/mn-6 Frah Ar 00 3.5 ppm 100 mm = 100.0 mm 4 LI PPM Min-7 0730: Used if thing & Occurre 1.4 PPM Mn-8 to begin Water Saypling († B-2-2016 WZ = 36.5 bes 19:30 - OFF-SITE -Note: SP-16 points left in - Puno sot alde to pull mater B-1-2016 # B-2-2016 F31 -Trouble shooting & tried another sampling tomorrow. PEO Jump. 0815: Continue Trante shouting 0320: Tried GeoTek Water Terra Feat value - not right taking but should work. wird 35 00 1/4"JD. 0900: TELKE to Geotek - They do not have prough inner rods to 5/2/6 drill another poring since Systems in B-1-2016 \$ B-2-2016. 0930: Pulling GUTOF SP-16 B-2-2016 in order to Rep drilling Will push in sp-16 to collect Gu sample later Rite in the Rain

31-1-11809-003 31-1-11809-003 16 9-15-16 (contd) 9-15-16 (contd) - B-4-2016(11.0') - PAH, GRO/BTEX B-3-2016 10:00 - Set up on RRO/ORO 10:15- Begin drilling - B-1001 - PAH B-3-2016 - B-4-2016 (35') - GRO/BTEX, DRO/ARO SEE FIELD LOG OF BORING (F) = Drilled 0-35 bas 13/0: Cattings containerized (55-501 - GW @ 34.0 bes D. Dilling drum - @ site 9 PD 12:40 - Sample collected From B-5-2016 15:20 SEE FIELD LOG OF BORING Vadose zone @ 33 Ft. - NO PID hits or indications of -Drilled Q-400 bas Gu @ 37.0' 695 Conteringtion. Sample B-3-2016(33.0') @ 1240 († Soil Sanples 3-5-2016 (27.5) @ 1625 PID=243 - GROXBTEX, DRO, PRO Ban - Boring back Filled with cuttings B-1002 @ 1650 - Dyp Tar From boring. GRO/STEX & PRO/RRO 12:50 B-4-2016 17:30 - GeoTek placing 5P-16 System back into B-2-2016 SEE FIELD LOG OF BORING So a Gu Sample can be collected. Drilled 0 - 40' bas (İ) - GW @ 36.0' bas D. Drilling Note: Drill Cuttings From Barings Soil Samples B-2-2016, B-4-2016, Z B-5-2016 PID 526AM B-4-2016(11.0')@ 1320 placed in 55 gal - labeled dram B-1001@ 1350 - PAH DUP oF B-4-2016(110) B-4-2016 (35,0') (# 1440 on NE property boundary. Rite in the Rain

31-1-11809-003 31-1-11809-003 9-15-16 (Cont'd) 9-15-16 (Contd) Purged 2 2.5 gallons From 17:35 - Sanding Elass B Public nell boring. U. Turbid boun to @ Kelley's Alaska Country In start & SL. Tarkid brown @ 17:40 - Calibrated YSI Pro Plus A time of Sazaling -See Calibration Log-19:10 Sampling @19:10 B-2-2016 (9-15-16) - PAH, 6-0/00-- used garden hose to purge then sample DRO/RRO part to sande B-1004 - Duplicate For - 100 gal. purged - readings Stabilized 13-2-2016(9-15-16) - PAH, GASTE - SEE MONTORING WELL SAMALING LOG-DRO/RRO @ 19240 SAMAES **H** Note we probe desaid in KACI (9-15-16) @ 18:15 nate liquina & nate rise. Vois, GROBTEX, ORORRO Purge mater & decon water B-1003 @ 18:45 run Through GAG DRUM # Z -Dyplicate For VOCS & discharged @ site. B-2-2016 18:50 9,25- B-1-2016 Water Sampling Water Sanpling 55-10 - Used a Water Terra Used a water Terra 55-10 (Fost Value) (Fast value) & 36'00 44" JD & 3/8" OD '4" ID Tabing to purge Tubing (= SOFT) to purge hater through SP-76 System. water From SP-16 system 19:30 - DTú From ground surface 18:55: DTW From ground sinter = 34,9' = 36.8 Note: Screened From 39.0' To 35.0. Note: Schenned From 38 to 34 FT Rite in the Rain

8

31-1-11809-003 31-1-11809-003 10 9 9-15-16 (Contid) SITE MAP KELLY'S ALASKA EQUIVITRY INT -Purged = 2.5 gatters From boring, U. Turbid brown @ Roy FR start to si. Turbid brown @ roll Fince 3-3-2063 (P) Time of sampling >@4 20:00 - Sampling _87 B-1-2016 (9-15-16) @ 20:00 中 GRO/BTEX, DRO/RRO Note: Purge nater & day note 979 From We indicator put VINT STACKS **A** through GAC DRUM #1 364 (III) & dischosed @ site. Parameters not taken due to sampling method. tin) 20:30 107 20:30 - OFF-SITE 00 70 B-1-206 Rite in the Rain

[11] 31-1-11809-003 31-1-11809-003 12 9-16-16 9-16-16 (Contd) On sanding 0700: 1220: ON-SITE - Generated Site map (See Page 10) B-6-2016 Useda Waterterra 55-10 (Fast Usike) - Measured Swing ties to borings († 0730: GeoTek Ak on-site Pulling I 3's 00 11 ID taking to puge 5P-16 system out of B-2-2016 water through 5A-16 system 0800: Calibrated PID #1 (Mini Rate 2000) - DThe From 65 = 365 Nota - Schemed From 39 FT TO 34 FT. See Calibration Log (H) - Purged 22.0 Gal From boring 0845: BORING B-6-2016 U. Turbid brown @ begin To 5%, tubid brann a sampling SEE FIELD LOG OF BORING -Drilled O-40 bys 12:50: Our SAMPLING -6W @x37.0' (İ) B-6-2016 (9-14-16) @ 1250 11:50 Done drilling - GRO/137EX, DRO/080. - Puze water & decan water From Note Kiners Last 10 FT became Stuck in barrel causing delays use indicator put though GAZ DRUM #1 & discharged & 5 Te 11:40 SAMALING - Soil -NO parameters collecter 255 Tubing used B-6-2016 (36.0') @ 11:40 PID = 0,0 - BTEX/GRO, DRO/PRO Note: Boring Eacht the ul cuttings - Gester placing SP-16 into burghole t place gravel placed to ground Surface. Asphalt not for our collection patched per ouners request - 7 Rite in the Kain

13 14 31-1-11809-003 31-1-11809-003 9-16-16 (Contid) 9-16-16 (Contid) 1745: GeoTet Rulking SP-16 From 1320; Mob to B-7-2016 Baring B-1-2016. -SEE FIELD LOG OF BORING-97 NOTE: All Sayals repton - Drilled 0-40'bas t) - GW@ × 38.0' bgs get ice in Lab-supplied coplers ton tranjourt back to 979 1515: Done drilling Fairbanks Sthe OFFice 1520: Sanding Soil 18:15- mob off site B-7-2016 (370) @ 1520 - Mal Back to FAIRBANK PID = 0.0 BTFX/GRO, DRO/RRO to drypott sayales & paper work -Boring backFilled w/ cuttings 20100 - @ OTFICE. 1530: mob to Boning B-8-2016 -SEE FIELD LOG OF BORING - Drilled O- 40FT bys -GW@ 37.5 bgs 1730: Pone Drilling 1745: SAMPLING SOIL B-8-2016 (37,0) @ 17:45 L) PID = 0.0 BTEX/GRO, DRO/BRO Rite in the Rain

APPENDIX C

SOIL BORING LOGS

Shannon & Wilson, Inc. (S&W), uses a soil identification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following pages. Soil descriptions are based on visual-manual procedures (ASTM D2488) and laboratory testing procedures (ASTM D2487), if performed.

S&W INORGANIC SOIL CONSTITUENT DEFINITIONS

CONSTITUENT ²	FINE-GRAINED SOILS (50% or more fines) ¹	COARSE-GRAINED SOILS (less than 50% fines) ¹
Major	Silt, Lean Clay, Elastic Silt, or Fat Clay ີ	Sand or Gravel ⁴
Modifying (Secondary) Precedes major constituent	30% or more coarse-grained: Sandy or Gravelly ⁴	More than 12% fine-grained: Silty or Clayey ³
Minor	15% to 30% coarse-grained: <i>with Sand</i> or <i>with Gravel</i> ⁴	5% to 12% fine-grained: <i>with Silt</i> or <i>with Clay</i> ³
constituent	30% or more total coarse-grained and lesser coarse- grained constituent is 15% or more: with Sand or with Gravel ⁵	15% or more of a second coarse- grained constituent: <i>with Sand</i> or <i>with Gravel</i> ⁵
¹ All percentages an ² The order of terms	e by weight of total speci s is: Modifying Major with	imen passing a 3-inch sieve h Minor.

³Determined based on behavior.

⁴Determined based on which constituent comprises a larger percentage.
⁵Whichever is the lesser constituent.

MOISTURE CONTENT TERMS

Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water

Wet Visible free water, from below water table

STANDARD PENETRATION TEST (SPT) SPECIFICATIONS

Hammer:	140 pounds with a 30-inch free fall. Rope on 6- to 10-inch-diam. cathead 2-1/4 rope turns, > 100 rpm
	NOTE: If automatic hammers are used, blow counts shown on boring logs should be adjusted to account for efficiency of hammer.
Sampler:	10 to 30 inches long Shoe I.D. = 1.375 inches Barrel I.D. = 1.5 inches Barrel O.D. = 2 inches
N-Value:	Sum blow counts for second and third 6-inch increments. Refusal: 50 blows for 6 inches or less; 10 blows for 0 inches.
NOTE: Pei bor hav effi	netration resistances (N-values) shown on ing logs are as recorded in the field and ve not been corrected for hammer ciency, overburden, or other factors.

DECODIDATIO								
DESCRIPTIO	N SIEVE NUMBER	AND/OR	APPROX					
FINES	< #200 (0.075	mm = 0.003 in.)						
SAND Fine	#200 to #40 (0	075 to 0	4 mm [.] (003 to 0.02 in 1				
Medium Coarse	#40 to #10 (0.4 #10 to #4 (2 to	4 to 2 mm; 0.02 to 0.08 in.) 9 4.75 mm; 0.08 to 0.187 in.)						
GRAVEL Fine Coarse	#4 to 3/4 in. (4. 3/4 to 3 in. (19	l.75 to 19 mm; 0.187 to 0.75 in.) ∂ to 76 mm)						
COBBLES	3 to 12 in. (76 t	to 305 m	m)					
BOULDER	S > 12 in. (305 m	ım)						
R	ELATIVE DENSIT	Y / CON	SISTEN	ICY				
COHESIO	NLESS SOILS		COHESI	VE SOILS				
N, SPT, BLOWS/FT.	RELATIVE DENSITY	N, S <u>BLOW</u>	6PT, /S/FT. (RELATIVE CONSISTENCY				
< 4	Very loose		< 2	Very soft				
4 - 10	Loose	2	- 4	Soft				
10 - 30	Medium dense	4	- 8	Medium stiff				
30 - 50	Dense	- 8	15	Stiff				
> 50	Very dense	15 -	30	Very stiff				
		>	30	Hard				
	S							
Be Ce	ntonite ment Grout	Pare Pare A Pare Pare Pare Pare	Surfac Seal	e Cement				
Ве	ntonite Grout		Asphal	Asphalt or Cap				
Be	ntonite Chips		Slough	I				
Sil	ica Sand		Inclino Non-pe	meter or erforated Casing				
Sc Sc	reened Casing		Vibratiı Piezon	ng Wire neter				
	PERCENTAG	ES TER	MS ^{1, 2}					
Tra	се		<	5%				
Fe	w		5 to	10%				
Litt	le		15 to	25%				
Sor	ne		30 to	9 45%				
Mos	stly		50 to	100%				
¹ Gravel, sand, ar organics, cobbles ² Reprinted, with p Description and I ASTM Internatior A copy of the cor www.astm.org	d fines estimated by i s, and boulders, estim permission, from AST dentification of Soils (al, 100 Barr Harbor I nplete standard may b	mass. Oth ated by vo M D2488 Visual-Ma Drive, Wes De obtaine	her consti blume. - 09a Stai nual Prod t Consho d from As	tuents, such as ndard Practice for cedure), copyright hocken, PA 19428 STM International,				

SOIL DESCRIPTION AND LOG KEY

31-1-11809-003

SHANNON & WILSON, INC. Geotechnical and Environmental Consultants

Sheet 1 of 3

(Modifie	UNIFIED S	SOIL CLASSIF E Tech Memo	ICATIO 3-357, <i>A</i>	N SYST ASTM D	EM (USCS) 2487, and ASTM D2488)
	MAJOR DIVISIONS	3	GROUP/	GRAPHIC IBOL	TYPICAL IDENTIFICATIONS
		Gravel	GW		Well-Graded Gravel; Well-Graded Gravel with Sand
	Gravels (more than 50%	(less than 5% fines)	GP		Poorly Graded Gravel; Poorly Graded Gravel with Sand
COARSE- GRAINED SOILS (more than 50% retained on No. 200 sieve)	of coarse fraction retained on No. 4 sieve)	Silty or Clayey Gravel	GM		Silty Gravel; Silty Gravel with Sand
		(more than 12% fines)	GC		Clayey Gravel; Clayey Gravel with Sand
		Sand	SW		Well-Graded Sand; Well-Graded Sand with Gravel
	Sands	(less than 5% fines)	SP		Poorly Graded Sand; Poorly Graded Sand with Gravel
	coarse fraction passes the No. 4 sieve)	Silty or Clayey Sand	SM		Silty Sand; Silty Sand with Gravel
		(more than 12% fines)	SC		Clayey Sand; Clayey Sand with Gravel
			ML		Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt
	Silts and Clays (<i>liquid limit less</i> <i>than 50</i>)	inorganic	CL		Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay
FINE-GRAINED SOILS		Organic	OL		Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay
passes the No. 200 sieve)		Inorgania	МН		Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt
	Silts and Clays (liquid limit 50 or more)	morganic	СН		Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay
		Organic	ОН		Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay
HIGHLY- ORGANIC SOILS	Primarily organi color, and c	c matter, dark in organic odor	PT		Peat or other highly organic soils (see ASTM D4427)

NOTE: No. 4 size = 4.75 mm = 0.187 in.; No. 200 size = 0.075 mm = 0.003 in.

NOTES

- 1. Dual symbols (symbols separated by a hyphen, i.e., SP-SM, Sand with Silt) are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart. Graphics shown on the logs for these soil types are a combination of the two graphic symbols (e.g., SP and SM).
- 2. Borderline symbols (symbols separated by a slash, i.e., CL/ML, Lean Clay to Silt; SP-SM/SM, Sand with Silt to Silty Sand) indicate that the soil properties are close to the defining boundary between two groups.

Interior Texaco Delta Junction, Alaska

SOIL DESCRIPTION AND LOG KEY

31-1-11809-003

SHANNON & WILSON, INC. Geotechnical and Environmental Consultants

Sheet 2 of 3

r	GRADATION TERMS	
Poorly Graded	Narrow range of grain sizes present or, within the range of grain sizes present, one or more sizes are missing (Gap Graded). Meets criteria in ASTM D2487, if tested. Full range and even distribution of grain sizes present. Meets criteria in ASTM D2487, if tested.	
	CEMENTATION TERMS ¹	
Weak	Crumbles or breaks with handling or slight	
Moderate	Crumbles or breaks with considerable finger	
Strong	pressure. Will not crumble or break with finger pressure.	
	PLASTICITY ²	.
DESCRIPTION	APPROX. PLASITICITY VISUAL-MANUAL CRITERIA INDEX RANGE	
Nonplastic	A 1/8-in. thread cannot be rolled < 4	
Low	A thread can barely be rolled and 4 to 10 a lump cannot be formed when drier than the plastic limit	
Medium	A thread is easy to roll and not 10 to 20 much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. A lump crumbles when drier than the plastic limit	
High	It takes considerable time rolling > 20 and kneading to reach the plastic limit. A thread can be rerolled several times after reaching the plastic limit. A lump can be formed without crumbling when drier than the plastic limit.	
r	ADDITIONAL TERMS	,
Mottled	Irregular patches of different colors.	
Bioturbated	Soil disturbance or mixing by plants or animals.	
Diamict	Nonsorted sediment; sand and gravel in silt and/or clay matrix.	
Cuttings	Material brought to surface by drilling.	
Slough	Material that caved from sides of borehole.	
Sheared	Disturbed texture, mix of strengths.	
PARTICL	E ANGULARITY AND SHAPE TERMS ¹	,
Angular	Sharp edges and unpolished planar surfaces.	
Subangular	Similar to angular, but with rounded edges.	.
Subrounded	Nearly planar sides with well-rounded edges.	
Rounded	Smoothly curved sides with no edges.	
Flat	Width/thickness ratio > 3.	
Elongated	Length/width ratio > 3.	
¹ Reprinted, with pe Description and Ide International, 100 E the complete stand	rmission, from ASTM D2488 - 09a Standard Practice f entification of Soils (Visual-Manual Procedure), copyrig Barr Harbor Drive, West Conshohocken, PA 19428. A lard may be obtained from ASTM International. www.a	for oht AST copy of stm.ora

²Adapted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

<u>ACRO</u>	DNYMS AND ABBREVIATIONS
ATD	At Time of Drilling
Diam.	Diameter
Elev.	Elevation
ft.	Feet
FeO	Iron Oxide
gal.	Gallons
Horiz.	Horizontal
HSA	Hollow Stem Auger
I.D.	Inside Diameter
in.	Inches
lbs.	Pounds
MgO	Magnesium Oxide
mm	Millimeter
MnO	Manganese Oxide
NA	Not Applicable or Not Available
NP	Nonplastic
O.D.	Outside Diameter
OW	Observation Well
pcf	Pounds per Cubic Foot
PID	Photo-Ionization Detector
PMT	Pressuremeter Test
ppm	Parts per Million
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
rpm	Rotations per Minute
SPT	Standard Penetration Test
USCS	Unified Soil Classification System
\mathbf{q}_{u}	Unconfined Compressive Strength
VWP	Vibrating Wire Piezometer
Vert.	Vertical
WOH	Weight of Hammer
WOR	Weight of Rods
Wt.	Weight

STRUCTURE TERMS

Interbedded	Alternating layers of varying material or color with layers at least 1/4-inch thick;
Laminated	Alternating layers of varying material or color with layers less than 1/4-inch thick; singular: lamination
Fissured	Breaks along definite planes or fractures with little resistance.
Slickensided	Fracture planes appear polished or glossy: sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps that resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay
Homogeneous	Same color and appearance throughout.

Interior Texaco Delta Junction, Alaska

SOIL DESCRIPTION AND LOG KEY

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SHANNON & WILSON, INC. Geotechnical and Environmental Consultants

Sheet 3 of 3

2013

	ENVIRONMENTAL BOREHOLE LOG														
Date	Started 9	9/14/ 1	16 ^I	_ocatio	on			Depth Water First Encountered (ft) 34.0							
Date	Completed	9/14/1	16 [[]	Orilling	J Comp	any c	Geotek	Alaska		Drilling Method 8040DT, Geoprobe					
Tota	I Depth (ft)	50	٤.0	Sampli	ng Met	hod	Macroco	ore		Hammer: Weight	(lbs)	Drop (in)			
Bore	hole Diam. (in)	2.2	25	Ground	d Elev.	(ft)	1'	159.0 M	onument Elev.	(ft) NA	PVC Elev. (f	t) NA	•		
Depth (ft)	Environmental Sample Number	Interval	Blow Count Blows/Ft	Recovery(%)	PID (ppm)	Time	Depth (ft)		Lithologic D	escription		Well Log	Depth (ft)		
E-							0.3	Asphalt pa	Ground S avement.	Surface			+		
5					0		3.2 6.0	Brown, Poo Well-Grade Brown to li Brown, Po moist.	orly Graded Gra ed Gravel with S ight gray, Silt wi orly Graded Sar	avel with Sand (GP) i Sand (GW); moist to ith Sand (ML); moist nd with Silt (SP-SM);	dry.		5		
15					0		11.0	Brown to lin (GP) to We	ght gray, Poorly ell-Graded Grave	/ Graded Gravel with el with Sand (GW); c	i Sand Iry.		15		
20					0							20			
30					0								30		
35 						20:00	34.5	Brown to lig and Sand (and Sand (ght gray, <i>Poorl</i> y (GP-GM) to Wel (GW-GM); wet.	/ Graded Gravel with Il-Graded Gravel with	n Silt n Silt	During Drilling	35		
45	B-1-2016 (47.0')					13:35	45.0 48.5	Red-browr - Sample E	ו to light gray, S 3-1A-2016 (47')	<i>Silt (ML)</i> ; wet. had a moisture cont	tent of		45		
50 							- 50.0	- Sample B 33.8% Brown to li (GP) to We	3-1B-2016 (47') ight gray, <i>Poorly</i> <i>ell-Graded Grave</i> Boring termina	had a moisture cont / Graded Gravel with el with Sand (GW); c tted at 50.0 feet.	ent of Sand	-	50		
				<u>1</u>					-						
י. דעוס השיים 2.	The discussion ir understanding of	the t the n	text of hature	this rep of the s	ort is n subsurfa	ecessar ace mate	y for a p erials.	In	nterior Texaco Lim Delta Ju	nited Site Cha Inction, Alas	aracterizatio ka	'n			
3. 4. 5.	Groundwater level Refer to KEY for USCS designatic	୬l, if ir expla on is b	ndicate ination based	ed abov ι of "Sy⊧ on visu	ve, is for mbols" ial-mani	r the date and defir ual class	e specifi nitions. sification	ied and may va unless otherwi	iry.	LOG OF BO	DRING B	-1-2016			
	noted.			LE	<u>EGEND</u>				Oc	tober 2016	3	1-1-11809-0	03		
NN ₩ ₩	2-inch O.D. Sr 3-inch O.D. Sr	olit Sp plit Sp	poon S poon S	Sample Sample		∑ (<u>▼</u> (Ground	Water Level AT Water Level in	TD SH Well Geot	IANNON & WILS	SON, INC. al Consultants	FIG. B-	1		

	ENVIRONMENTAL BOREHOLE LOG													
Date	Started	9/14/16	Locati	on	Dowr	ngradie	nt, N. Build	ling	Depth Water First Encountered (ft) 37.0					
Date	Completed s	9/14/16	Drillin	g Comp	bany (Geotek	Alaska		Drilling Method 8040DT, Geoprobe					
Total	l Depth (ft)	50.0	Sampl	ling Met	thod I	Macroco	ore			Hammer: Weight	(lbs)	Drop (i	n)	
Bore	hole Diam. (in)	2.25	Groun	d Elev.	(ft)	1159.0 Monument			Elev.	(ft) NA	PVC Elev. (f	it)	NA	
Depth (ft)	Environmental Sample Number	Interval Blow Count	Blows/Ft Recovery(%)	PID (ppm)	Time	Depth (ft)		Litholo	gic D	escription		Soil Log Well Log	Depth (ft)	
				+	+	0.3	Asphalt	pavement.	ound S	urface				
5	B-2-2016 (6.0')			95 205 257		4.2 7.0	Brown a Sand (G dry. Brown t	and light gra (SP) to Well-G	y, Pooi Fraded Silt (M	rly Graded Gravel w Gravel with Sand ((IL); moist.	/ith GW);		5	
10				54.6 16.1 10.1		11.0	Brown, A Brown, A Well-Gra	Poorly Grad Poorly Grad aded Sand v	ed San ed San vith Gra	nd (SP); moist. Ind with Gravel (SP) i avel (SW); moist.	to	······································	10	
20				5.4 4.1		16.0	Brown to (GP) to wet belo	o light gray, <i>Well-Gradec</i> ow 37.0 feet	Poorly d Grave	Graded Gravel with sand (GW); r	h Sand moist;		20	
25				0									25	
30				0									30	
40	B-2-2016 (36.0')										•		23	
45	B-2-2016 (47.5')					47.0	Red-brc	own to light c	nrav, S	Silf (MI): wet.			تَــــــــــــــــــــــــــــــــــــ	
50	B-2-2016 (49.5')					49.5 50.0	Red-bro	wn to light g	gray, S	ill with Gravel (ML);	dry.		50	
55								Boring to) IIIIIIa				55	
1.	The stratification	lines rep	resent th	NOTES	ximate t	boundari	es between :	soil r			I	l		
2.	types, and the tra The discussion in understanding of	nsition m the text the natu	ay be gr of this re re of the	adual. port is n subsurfa	iecessai ace mat	ry for a p erials.	vroper		In	iterior Texaco Lin Delta Ji	nited Site Ch unction, Alas	aracteriza ka	ation	
3. 4. 5.	Groundwater level Refer to KEY for USCS designatio	l, if indic: explanati n is base،	ated abo ion of "Sy ed on visi	ve, is toi ymbols" ual-mani	r the dat and defi ual clas:	te speciti initions. sification	ied and may າ unless othe	[,] vary. erwise		LOG OF B	ORING B	-2-201	6	
	noted.		Ŀ	<u>.EGEND</u>	<u>)</u>				Oct	tober 2016	3	1-1-11809	9-003	
	2-inch O.D. Sp 3-inch O.D. Sp	olit Spoor olit Spoor	n Sample n Sample	9 }	⊻ ⊻	Ground	Water Level Water Level	i ATD I in Well	SH Geot	ANNON & WIL	SON, INC. al Consultants	FIG.	B-2	

	ENVIRONMENTAL BOREHOLE LOG													
Date	Started ç	9/15/1	16 L	ocatio	on		Downgra	adient, NE		Depth Water First	Encounter	ed (ft)	34.0	
Date	Completed ç)/15/1	16 ^C)rilling	J Comp	any (Geotek /	Alaska		Drilling Method	040DT, Ge	oprob	be	
Tota	Depth (ft)	35.	.0 S	ampli	ng Met	hod I	Macrocc	ore		Hammer: Weight	(Ibs)	-	Drop (in)	
Bore	hole Diam. (in)	2.2	25 0	Found	d Elev.	(ft)	11	159.0 Mon	ument Elev	. (ft) NA	PVC Elev	/. (ft)	NA	
Depth (ft)	Environmental Sample Number	Interval	Blow Count Blows/Ft	tecovery(%)	PID (ppm)	Time	Depth (ft)	Li	thologic [Description		Soil Log	Well Log	Depth (ft)
			_		<u> </u> '		0.3	Asphalt pave	Ground Sement.	Surface		<u>.</u>	,	<u> </u>
5					0		4.7	Brown, Poorly Well-Graded	y Graded Sa Sand with S t gray Silt (I	nd with Silt (SP-SM) ilt (SW-SM); moist.	to			5
					0		7.5	Brown, Poorl	y Graded Sa	<i>nd (SP</i>); moist.			- •	
					0		11.0	Brown, <i>Poorl</i> y Well-Graded	ly Graded Sa Sand with G	nd with Gravel (SP) t ravel (SW); moist to	o dry.	••••••		
					0		16.5	Brown to ligh (GW); dry to	t gray, <i>Well-</i> moist to wet	Graded Gravel with S below 34 feet.	Sand			10
25					0									25
30					0									30
35	B-3-2016 (33.0')				0 0		- 35.0						, bili	35
40								Вс	oring termina	ated at 35.0 feet.			Durring Dr	40
45														45
50														50
55														55
				1	<u>IOTES</u>									
2. 2.	The stratification types, and the tra The discussion ir understanding of	lines i nsition the to the n	repres in may text of the nature of	ent the be gra this re of the s	 approx idual. port is n subsurfa 	kimate b lecessar ace mate	Poundarie ry for a pi erials.	is between soil roper		nterior Texaco Lim Delta Ju	ited Site	Chara laska	acterizatio	n
3. 4. 5.	Groundwater leve Refer to KEY for USCS designatic	⊧l, if in expla⊧ ∕n is b	ndicate Ination Dased (d abov: of "Sy on visu	/e, is for mbols" ; ial-manı	r the dat and defi ual clas:	te specifi initions. sification	ed and may vary. unless otherwise		LOG OF BO	ORING	B-3	-2016	
	noted.			LF	<u>EGEND</u>	-			00	ctober 2016		31-1	-11809-00	03
	2-inch O.D. Sr 3-inch O.D. Sr	olit Sp olit Sp	boon S boon S	ample ample		⊻ ⊻	Ground \ Ground \	Water Level ATD Water Level in We	ell Geo	HANNON & WILS	ON, INC		FIG. B-3	3

	ENVIRONMENTAL BOREHOLE LOG														
Date	Started	9/15/16	Locatio	on		Former	UST Area			Depth Water F	irst Encou	ntered	(ft)	36.0	
Date	Completed	9/15/16	Drilling	g Comp	any	Geotek /	Alaska			Drilling Method 8040DT, Geoprobe					
Total	Depth (ft)	40.0	Sampl	ing Met	thod	Macrocc	1000			Hammer: Weig	ght (lbs)	,	D	rop (in)	
Bore	hole Diam. (in)	2.25	Groun	d Elev.	(ft)	11	159.0	Monumen	t Elev.	(ft) NA	PVC	Elev. (f	t)	NA	
Depth (ft)	Environmental Sample Number	Interval Blow Count	Blows/Ft Recovery(%)	PID (ppm)	Time	Depth (ft)		Lithologic Description					Sul Lug	Well Log	Depth (ft)
5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	B-4-2016 (11.0') B-1001			8.9 4.8 11.4 79.8 526 241		0.3	Asphali Brown, Brown, Well-Gi	Gr t pavement. Silt with Gra Poorly Grad raded Sand	ded San with Gra	urtace L); moist. ad with Gravel (G avel (SW); moist				10 15 15	
20 25 1 30	B-4-2016 (35.0')			184 302 94 104 19.4 124 24 19 9.4		18.0	Brown (GW); r	to light gray noist to dry.	, Well-G	Graded Gravel w			g Drilling j∆	20 25 30 35	
40 141 45 50 55 10 11 11 155						40.0		Boring t	erminat	ted at 40.0 feet.				Duri	40 45 50 55
			 !	NOTES											
1. 2.	The stratification types, and the tra The discussion ir understanding of	lines repr ansition m the text the natur	esent the ay be gra of this re e of the	e approx adual. port is n subsurfa	boundarie ary for a pi terials.	soil	In	terior Texaco Delta	Limited S a Junctior	ite Cha n, Alas	arac ka	terizatio	n		
3. 1 4. 1 5.	 Groundwater level, if indicated above, is for the date specified and may vary. Refer to KEY for explanation of "Symbols" and definitions. USCS designation is based on visual-manual classification unless otherwise 									LOG OF	BORIN	IG B	-4-2	2016	
	noted.		Ľ	<u>EGEND</u>					Oct	tober 2016		3	1-1-1	1809-00	03
	2-inch O.D. S 3-inch O.D. S	plit Spoon plit Spoor	Sample Sample	;	⊻ ⊻	Ground V Ground V	Water Leve Water Leve	l ATD i in Well	SH Geotr	ANNON & W	ILSON, I	NC.	F	IG. B-4	4

	ENVIRONMENTAL BOREHOLE LOG														
Date	Started	9/15/16	Loca	ition		Former	UST Area			Depth Water First	Encounter	red (fi	^{t)} 37.0		
Date	Completed	9/15/16	Drilli	ng Comp	bany (Geotek /	Alaska			Drilling Method	3040DT, Ge	eopro	be		
Total	Depth (ft)	40.0	Sam	pling Met	thod	Macroco	ore			Hammer: Weight (Ibs) Drop (in)					
Bore	hole Diam. (in)	2.25	Grou	und Elev.	(ft)	1159.0 Monument El			t Elev.	(ft) NA	PVC Elev	v. (ft)	NA		
Depth (ft)	Environmental Sample Number	Interval Blow Count	Blows/Ft Recovery(%)	PID (ppm)	Time	Depth (ft)		Litholc	ogic D	escription	Soil Log	Well Log	Depth (ft)		
			·			0.3	Asphali	Gro t pavement.	ound S	urface			•	+	
5				0		3.5	Brown, (<i>SP-SM</i> (<i>SW-SI</i> Brown,	Poorly Grac 1) to Well-Gr M); moist. Silt (ML); m	led San aded S	nd with Silt and Grav and with Silt and Gra	el avel			5	
10				0		9.5	Brown, moist.	Poorly Grac	led San	nd with Silt (SP-SM);				10	
20				0		15.5 18.5	Brown	own, Sandy and gray, Po	Silt (ML oorly Gi	L); moist. raded Sand with Gra	ivel		· · · · · · · · · · · · · · · · · · ·	20	
25				0		26.0	to dry.	to light grav		Creded Gravel with S	Pond			25	
	B-5-2016 (27.5'). B-1002			243 24.5 10.4			<i>(GW)</i> ; c	iry; wet belo)w 37.0	feet.	Sariu			30	
35				8.3 0								∎ L T	35		
40						<u> </u>		Boring t	ermina	ted at 40.0 feet.		• • •	During Dr	40	
50														40	
55														55	
1.	The stratification	lines re	present	NOTES the appro:	ximate t	boundarie	es between	soil							
2.	 types, and the transition may be gradual. The discussion in the text of this report is necessary for a propunderstanding of the nature of the subsurface materials 								In	iterior Texaco Lim Delta Ju	ited Site Inction, A	Char Iaska	acterizatio	n	
 Groundwater level, if indicated above, is for the date specified and may vary. Refer to KEY for explanation of "Symbols" and definitions. USCS designation is based on visual-manual classification unless otherwise 										LOG OF BO	ORING	в-(5-2016		
	noted.			<u>LEGEND</u>	!				Oct	tober 2016		31-	1-11809-0	03	
	2-inch O.D. Sr 3-inch O.D. Sr	olit Spoo plit Spoo	on Samp on Samp)le)le	⊻ ₹	Ground	Water Leve Water Leve	l ATD l in Well	SH Geot	ANNON & WILS	ON, INC	;.	FIG. B-	5	

ENVIRONMENTAL BOREHOLE LOG															
Date	Started	/16/16	Location Former Western Fuel Island							Depth Water First Encountered (ft) 37.0					
Date	Completed	/16/16	Drilling Company Geotek A				Jaska Drilling Me			Drilling Method	od 8040DT, Geoprobe				
Tota	Depth (ft)	Sampling Method Macroc				ore			Hammer: Weight (lbs) Drop (in)						
Bore	Borehole Diam. (in) 2.25			Ground Elev. (ft)			159.0 Monument Elev		t Elev.	(ft) NA	PVC Elev.	(ft)	NA		
Depth (ft)	Environmental Sample Number	Interval Blow Count	Blows/Ft Recovery(%)	PID (ppm)	Time	E Litholog				escription		Soil Log	Well Log	Depth (ft)	
E						0.3	Asphalt	Grophy Bavement.	ound S	urface		૾૾૾૾૾૾	3		
5				0		1.5	Brown, Poorly Graded Sand with Gravel (SP) to Well-Graded Sand with Gravel (SW); moist. Brown, Sandy Silt (ML); moist.						5		
10 10 10 15			0			9.5	Brown, Poorly Graded Sand (SP); moist.							10	
20				0		17.0 19.0	Brown, S Brown to <i>(GW</i>); di	S <i>ilt (ML)</i> ; wo b light gray	et. , <i>Well-C</i>	Graded Gravel with S	Sand		- -	20	
25				0										25	
30			0		30.0	Light to <i>(GW</i>); m	dark gray, loist to dry.	Well-Gı	raded Gravel with Sa	and			30		
	B-6-2016 (36')										Drilling ⊼	35			
						40.0		Boring t Boring	erminat comple	ted at 40.0 feet. eted 9/16/2016			During	45	
50														50	
														55	
NH NH	<u>NOTES</u> 1. The stratification lines represent the approximate boundaries between soil														
18 2.	types, and the transition may be gradual.2. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.								In	terior Texaco Lim Delta Ju	iited Site C Inction, Ala	hara Iska	icterizatio	n	
00-60811-1-1-15.	 Groundwater level, if indicated above, is for the date specified and may vary. Refer to KEY for explanation of "Symbols" and definitions. USCS designation is based on visual-manual classification unless otherwise 									LOG OF BORING B-6-2016					
	noted. LEGEND								October 2016 31-1-11809-003					03	
	⊥ 2-inch O.D. Split Spoon Sample ⊥ Ground Water Level ATD ⊥ 3-inch O.D. Split Spoon Sample ⊥ Ground Water Level in Well							ATD in Well	SHANNON & WILSON, INC. Geotechnical and Environmental Consultants FIG. B-6				6		

ENVIRONMENTAL BOREHOLE LOG																
Date	Started ç)/16/ [.]	16 L	_ocatio	on	West	t of For	mer UST Ar	ea	Depth Water First Encountered (ft) 38.0						
Date	Completed ç)/16/ [.]	16 [[]	Drilling Company Geotek Alaska						Drilling Method 8040DT, Geoprobe						
Tota	Depth (ft)	s 0.0	Sampling Method Macrocol				ore	re Hammer: Weight (Ibs)			(lbs)) Drop (in)				
Borehole Diam. (in) 2.25				Ground Elev. (ft) 11				159.0	Monument	Elev.	(ft) NA	PVC Elev.	(ft)	NA		
Depth (ft)	Depth (Tt) Depth (Tt) Blow Count Blows/Ft Recovery(%)				Recovery(%) PID (ppm) Time	Time	Depth (ft)		Lithologic Description				Soil Log	Well Log	Depth (ft)	
5					0		0.3 2.0	Brown, F Well-Gra Brown, S	Grc Poorly Grad aded Sand v Silty Sand (S	<u>ed San</u> vith Gra SM); m	urface nd with Gravel (SP) t avel (SW); moist. loist.			5		
10 					0		11.5	Brown, F	Brown, Poorly Graded Sand (SP); moist.						10	
20				0			16.5 18.5	Brown, S Brown ar	Brown, Silt (ML); wet. Brown and light gray, Poorly Graded Gravel with			rith			20	
 25					0			dry.	r <i>) to won</i> c	11000	Glaver with Gand (300),			25	
30			0										30			
35	B-7-2016 (37')				0								Ā	35		
2 				40.0						ermina	ted at 40 0 feet	During Drilling	40			
45 									20	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					45	
50															50	
															55	
				1	NOTES											
1. 2.	The stratification types, and the tra The discussion ir understanding of	lines nsitic 1 the the r	repres on may text of nature	sent the be gra this rep of the s) approx idual. port is n subsurfa	imate b ecessar	oundarie ry for a p erials.	əs between so oroper	oil	Interior Texaco Limited Site Characterization Delta Junction, Alaska					n	
3. 4. 5.	Groundwater leve Refer to KEY for USCS designatio	il, if ir؛ expla n is t	ndicate anation based	∋d abov ı of "Sy⊧ on visu	/e, is for mbols" ; ıal-manı	the dat and defi ual clase	e specifi initions. sification	ied and may	vary. rwise	LOG OF BORING B-7-2016						
	noted.			LE	<u>EGEND</u>					October 2016 31-1-11809-003					03	
	⊥ 2-inch O.D. Split Spoon Sample ☑ Ground Water Level ATD Ⅲ 3-inch O.D. Split Spoon Sample ☑ Ground Water Level in Well								ATD in Well	SH Geot	ANNON & WILS	WILSON, INC. ironmental Consultants FIG. B-7			7	

ENVIRONMENTAL BOREHOLE LOG															
Date	Started 9	/16/16	Location East of Former UST Area							Depth Water First Encountered (ft) 37.5					
Date	Completed 9	/16/16	Drilling Company Geotek Alaska						Drilling Method 8040DT Geoprobe						
Tota	Total Depth (ft) 40.0			Sampling Method Macroco						Hammer: Weight (lbs) Drop (in)					
Borehole Diam. (in) 2.25			Groun	Ground Elev. (ft)			159.0	Monumen	t Elev.	PVC Elev. (Elev. (ft)				
Depth (ft)	Environmental Sample Number	Interval Blow Count	Blows/Ft Recovery(%)	PID (ppm)	Time	Depth (ft)	Lithologic Description						Well Log	Depth (ft)	
E						0.3	Asphalt	Gr pavement.	ound S	urface					
5 5				0		4.0 7.5	Brown, (SP-SM (SW-SM Brown a	Poorly Grac 1) to Well-Gr /); moist. and light gra	ed Sand with Silt and Gravel						
10							Brown,	Poorly Grad	led San	<i>nd (SP</i>); moist.				10	
15				0		13.5	Brown and light gray, Poorly Graded Gravel with Sand (GP) to Well-Graded Gravel with Sand (GW);							15	
20				0 moist to dry.										20	
25				0										25	
30														30	
35														35	
40	B-8-2016 (37')			0		— 40.0						ring Drilling _∱	40		
45							Boring terminated at 40.0 feet.					Du	45		
50								50							
														55	
	<u>NOTES</u>														
1. 2.	The stratification l types, and the train The discussion in understanding of	esent the ay be gra of this re e of the	e approx adual. port is ne subsurfa	ecessar	oundarie y for a p erials.	es between roper	soil	In	terior Texaco Lim Delta Jເ	nited Site Ch unction, Alas	arac ska	terizatio	n		
300-60811-1-15	Groundwater leve Refer to KEY for e	I, if indic explanati n is base	ated abo on of "Sy d on visu	ve, is for mbols" a ial-manu	the dat and defi al class	e specifi nitions. sification	ied and may unless othe	y vary. erwise	LOG OF BORING B-8-2016						
Y III	noted.		<u>L</u>	<u>EGEND</u>			October 2016 31-1-*				-11809-003				
	⊥ 2-inch O.D. Split Spoon Sample ∑ Ground Water Level ATD Ⅲ 3-inch O.D. Split Spoon Sample ∑ Ground Water Level in Well								SH Geote	ANNON & WILS echnical and Environmenta	SON, INC. al Consultants	INC. FIG. B-8			

APPENDIX D

SELECTED SITE PHOTOGRAPHS



Photo 1: Overview of the Interior Texaco project site. (September 14, 2016)



Photo 2: Location of boring B-1-2016. South east side of service station. Temporary Well Installed (SP-16). (September 14, 2016)



Photo 3: View of lithology in Boring B-1-2016. Top left at ground surface. Bottom right at 50-ft bgs. Each liner is 5 ft in length. (September 14, 2016)



Photo 4: B-2-2016 Close up of the confining layer. (September 14, 2016)

1809 Interior Texaco Limited Site Characterization Report.docx



Photo 5: View of well and sample port at Kelly's Alaska Country Inn. (September 15, 2016)



Photo 6: Boring B-6-2016. Temporary well point installed (SP-16). (September 16, 2016)



Photo 7: Boring B-7-2016. Near the northwest property corner. (September 16, 2016)



Photo 8: Boring B-8-2016. Located just east of the former tank pit. (September 16, 2016)

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APPENDIX E

SGS LABORATORY REPORT AND ADEC DATA REVIEW CHECKLIST FOR ANALYTICAL RESULTS

WORK ORDER NO. 1168600


Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks 5430 Fairbanks Street, Suite 3 Anchorage, AK 99518 907-479-0600

Report Number: 1168600

Client Project: Interior Texaco

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely, SGS North America Inc.	Styphen C. Ed.	Stephen Ede 2016.10.10
	Alaska Division Technical Director	13:17:41 -08'00'
Jennifer Dawkins Project Manager	Date	

SGS North America Inc.

SGS North America Inc.

Case Narrative

Customer: SHANFBKShannon & Wilson-FairbanksProject:1168600Interior Texaco

Refer to the sample receipt form for information on sample condition.

1168600008 PS 27.5'

AK101 - Surrogate recovery for 4-bromofluorobenzene (214%) does not meet QC criteria due to matrix interference.

1168600012 PS 6.0'

AK101 - Surrogate recovery for 4-bromofluorobenzene (198%) does not meet QC criteria due to matrix interference.

1168600014 PS 47.5'

AK101 - Surrogate recovery for 4-bromofluorobenzene (184%) does not meet QC criteria due to matrix interference.

1168600017 PS 11.0'

AK101 - Surrogate recovery for 4-bromofluorobenzene (997%) does not meet QC criteria due to matrix interference. AK102 - Surrogate recovery for 5a-androstane (271%) does not meet QC criteria due to sample dilution (40X). 8270D SIM - PAH surrogate recovery for 2-fluorobiphenyl (216%) does not meet QC criteria due to sample dilution (50X).

1168600019 PS B-1001

8270D SIM - PAH surrogate recovery for 2-fluorobiphenyl (209%) does not meet QC criteria due to sample dilution (50X).

1168600020 PS B-1002

AK101 - Surrogate recovery for 4-bromofluorobenzene (214%) does not meet QC criteria due to matrix interference.

1354117 LCS VXX/29621

8260B - LCS recovery for bromomethane (142%) is outside of QC criteria. This analyte was not detected above the LOQ in the associated samples.

1354118 LCSD VXX/2962

8260B - LCSD recovery for chloromethane (158%) and bromomethane (148%) are outside of QC criteria. These analytes were not detected above the LOQ in the associated samples.



Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
Μ	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
11	Indicates the analyte was analyzed for but not detected.

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Note:



Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix	
B-1-2016(9-15-16)	1168600001	09/15/2016	09/20/2016	Water (Surface, Eff., Ground)	
B-6-2016(9-16-16)	1168600002	09/16/2016	09/20/2016	Water (Surface, Eff., Ground)	
B-2-2016(9-15-16)	1168600003	09/15/2016	09/20/2016	Water (Surface, Eff., Ground)	
B-1004	1168600004	09/15/2016	09/20/2016	Water (Surface, Eff., Ground)	
KACI(9-15-16)	1168600005	09/15/2016	09/20/2016	Water (Surface, Eff., Ground)	
B-1003	1168600006	09/15/2016	09/20/2016	Water (Surface, Eff., Ground)	
B-6-2016(36.0')	1168600007	09/16/2016	09/20/2016	Soil/Solid (dry weight)	
B-5-2016(27.5')	1168600008	09/15/2016	09/20/2016	Soil/Solid (dry weight)	
B-7-2016(37.0')	1168600009	09/16/2016	09/20/2016	Soil/Solid (dry weight)	
B-8-2016(37.0')	1168600010	09/16/2016	09/20/2016	Soil/Solid (dry weight)	
B-1-2016(47.0')	1168600011	09/14/2016	09/20/2016	Soil/Solid (dry weight)	
B-2-2016(6.0')	1168600012	09/14/2016	09/20/2016	Soil/Solid (dry weight)	
B-2-2016(36.0')	1168600013	09/14/2016	09/20/2016	Soil/Solid (dry weight)	
B-2-2016(47.5')	1168600014	09/14/2016	09/20/2016	Soil/Solid (dry weight)	
B-2-2016(49.5')	1168600015	09/14/2016	09/20/2016	Soil/Solid (dry weight)	
B-3-2016(33.0')	1168600016	09/15/2016	09/20/2016	Soil/Solid (dry weight)	
B-4-2016(11.0')	1168600017	09/15/2016	09/20/2016	Soil/Solid (dry weight)	
B-4-2016(35.0')	1168600018	09/15/2016	09/20/2016	Soil/Solid (dry weight)	
B-1001	1168600019	09/15/2016	09/20/2016	Soil/Solid (dry weight)	
B-1002	1168600020	09/15/2016	09/20/2016	Soil/Solid (dry weight)	
Trip Blank	1168600021	09/15/2016	09/20/2016	Water (Surface, Eff., Ground)	
Trip Blank	1168600022	09/14/2016	09/20/2016	Soil/Solid (dry weight)	
Method	Method De	<u>scription</u>			
8270D SIM LV (PAH)	8270 PAH \$	SIM GC/MS Liq/Lic	l ext. LV		
8270D SIM (PAH)	8270 PAH \$	SIM Semi-Volatiles	GC/MS		
AK101	AK101/802	1 Combo.			
SW8021B	AK101/802	1 Combo.			
AK101	AK101/802	AK101/8021 Combo. (S)			
SW8021B	AK101/802	1 Combo. (S)			
AK102	Diesel/Resi	dual Range Organ	ics		
AK103	Diesel/Resi	dual Range Organ	ics		
AK102	DRO/RRO	Low Volume Wate	r		
AK103	DRO/RRO	Low Volume Wate	r		
SM21 2540G	Percent So	lids SM2540G			

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SW8260B

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com

Volatile Organic Compounds (W) FULL



Client Sample ID: B-1-2016(9-15-16) Lab Sample ID: 1168600001 Semivolatile Organic Fuels	<u>Parameter</u> Diesel Range Organics	<u>Result</u> 0.338J	<u>Units</u> mg/L
Client Sample ID: B-6-2016(9-16-16) Lab Sample ID: 1168600002 Semivolatile Organic Fuels	<u>Parameter</u> Diesel Range Organics	<u>Result</u> 0.363J	<u>Units</u> mg/L
Client Sample ID: B-2-2016(9-15-16) Lab Sample ID: 1168600003 Polynuclear Aromatics GC/MS	<u>Parameter</u> 1-Methylnaphthalene 2-Methylnaphthalene Benzo(a)Anthracene	<u>Result</u> 0.731 0.279 0.0166J	<u>Units</u> ug/L ug/L ug/L
	Benzo[a]pyrene Dibenzo[a,h]anthracene Fluoranthene Fluorene	0.0110J 0.0119J 0.0172J 0.0288J	ug/L ug/L ug/L ug/L
Semivolatile Organic Fuels	Naphthalene Phenanthrene Pyrene Diesel Range Organics	0.234 0.0310J 0.0202J 1.11	ug/L ug/L ug/L ma/L
Volatile Fuels	Gasoline Range Organics	0.0354J	mg/L
Client Sample ID: B-1004 Lab Sample ID: 1168600004 Polynuclear Aromatics GC/MS	Parameter 1-Methylnaphthalene 2-Methylnaphthalene Benzo(a)Anthracene Benzo[a]pyrene Dibenzo[a,h]anthracene Fluoranthene Naphthalene Phenanthrene Pyrene	Result 0.796 0.292 0.0166J 0.0104J 0.0122J 0.0156J 0.236 0.0315J 0.0182J	Units ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L
Semivolatile Organic Fuels Volatile Fuels	Diesel Range Organics Gasoline Range Organics	1.04 0.0315J	mg/L mg/L
Client Sample ID: KACI(9-15-16) Lab Sample ID: 1168600005 Semivolatile Organic Fuels	<u>Parameter</u> Diesel Range Organics	<u>Result</u> 0.276J	<u>Units</u> mg/L
Lab Sample ID: 1168600006 Volatile GC/MS	<u>Parameter</u> 1,2-Dichloroethane	<u>Result</u> 0.290J	<u>Units</u> ug/L

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Client Sample ID: B-6-2016(36.0')			
Lab Sample ID: 1168600007	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	26.7	mg/Kg
C C	Residual Range Organics	163	mg/Kg
Volatile Fuels	Gasoline Range Organics	1.19J	mg/Kg
	o-Xylene	0.0340	mg/Kg
	P & M -Xylene	0.0725	mg/Kg
Client Sample ID: B-5-2016(27 5)			
Lab Sample ID: 1168600008	Parameter	Popult	Lipito
Semivalatile Organia Evale	<u>Falanelei</u> Diosol Rango Organics	Result 805	<u>Units</u> ma/Ka
Semivolatile Organic Fuels	Diesei Kange Organics	20.4	mg/Kg
Volotilo Euclo	Renzene	0.00684.1	mg/Kg
volatile rueis	Ethylhonzono	0.0000-0	mg/Kg
	Casolino Bango Organico	18.3	mg/Kg
		0.271	mg/Kg
		0.271	mg/Kg
		0.01951	mg/Kg
	Toluene	0.01655	mg/Kg
Client Sample ID: B-7-2016(37.0')			
Lab Sample ID: 1168600009	Parameter	<u>Result</u>	<u>Units</u>
Volatile Fuels	Gasoline Range Organics	1.81J	mg/Kg
	o-Xylene	0.0170J	mg/Kg
	P & M -Xylene	0.0513J	mg/Kg
Client Sample ID: B-8-2016(37.0')			
Lab Sample ID: 1168600010	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	557	ma/Ka
	Residual Range Organics	46.0	ma/Ka
Volatile Euels	Gasoline Range Organics	1.52J	ma/Ka
	o-Xvlene	0.0432	ma/Ka
	P & M -Xvlene	0.0671	ma/Ka
	Parameter	<u>Result</u>	<u>Units</u>
Semivolatile Organic Fuels	Residual Range Organics	16.7J	mg/Kg
Volatile Fuels	Gasoline Range Organics	10.6	mg/Kg
	o-Xylene	0.0240J	mg/Kg
	P & M -Xylene	0.0727J	mg/Kg
	Ioluene	0.0709	mg/Kg

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Lab Sample ID: 1168600012Parameter Diesel Range OrganicsResidu 10400mg/Kg mg/KgSemivolatile Organic FuelsEthybenzene Q as M- xylene P & M - xylene0.013.01mg/Kg mg/KgVolatile FuelsEthybenzene Q as M- xylene0.455mg/KgClient Sample ID: B-2-2016(36.0')Ethybenzene P & M - xylene0.0149.01mg/KgClient Sample ID: B-2-2016(36.0')Ethybenzene P & M - xylene16.6.1mg/KgClient Sample ID: B-2-2016(36.0')Ethybenzene Residual Range Organics18.6.1mg/KgSemivolatile Organic FuelsGasoline Range Organics14.6.1mg/KgVolatile FuelsGasoline Range Organics0.0212mg/KgVolatile FuelsGasoline Range Organics56.5mg/KgVolatile Organic FuelsDiesel Range Organics56.5mg/KgSemivolatile Organic FuelsDiesel Range Organics56.5mg/KgVolatile FuelsDiesel Range Organics56.5mg/KgClient Sample ID: B-2-2016(47.5')Ethybenzene1.33mg/KgLab Sample ID: B-2-2016(47.5')Ethybenzene1.33mg/KgClient Sample ID: B-2-2016(49.5')Ethybenzene1.33mg/KgVolatile FuelsDiesel Range Organics38.3mg/KgVolatile FuelsDiesel Range Organics3.0.1mg/KgP & M -Xylene0.0212mg/Kg6asoline Range Organics1.1.3.1mg/KgClient Sample ID: B-2-2016(49.5')Ethybenzene0.0323mg/KgLab Sample ID:	Client Sample ID: B-2-2016(6.0')			
Semivolatile OrganicsDiesel Range Organics10400mg/kg mg/kgVolatile FuelsDiesel Range Organics258mg/kgGasoline Range Organics61.4mg/kgGasoline Range Organics61.4mg/kgo-Xylene1.63mg/kgToluene0.0149.Jmg/kgClient Sample ID: 1186800013ParameterEntryleneSemivolatile Organic FuelsDiesel Range Organics18.6.Jmg/kgVolatile FuelsDiesel Range Organics18.6.Jmg/kgClient Sample ID: 1186800013ParameterEssitual Range Organics18.6.Jmg/kgSemivolatile Organic FuelsDiesel Range Organics5.7.1mg/kgVolatile FuelsGasoline Range Organics5.5.1mg/kgVolatile FuelsGasoline Range Organics5.5.1mg/kgClient Sample ID: 19-2-2016(47.5')Ethylbenzene0.0212.Jmg/kgLab Sample ID: 1168600014ParameterResultUnitsSemivolatile Organic FuelsEthylbenzene1.39mg/kgVolatile FuelsGasoline Range Organics3.8.3mg/kgClient Sample ID: 1168600015ParameterLasmg/kgSemivolatile Organic FuelsParameterResidual Range Organics3.8.3mg/kgVolatile FuelsCasoline Range Organics1.8.3mg/kgClient Sample ID: 1168600015ParameterResidual Range Organics1.9.3mg/kgSemivolatile Organic FuelsParameterResidual Range Organics3.07.J<	Lab Sample ID: 1168600012	Parameter	Result	Units
Volatile FuelsResidual Range Organics258mg/KgUsing KgGasoline Range Organics61.4mg/KgGasoline Range Organics61.4mg/KgP & M - Xylene1.63mg/KgToluene0.0148.3mg/KgClient Sample ID: 16.2-2016(36.0')EarameterEessuitUnitsSamivolatile Organic FuelsDiesel Range Organics18.6.3mg/KgSemivolatile Organic FuelsGasoline Range Organics14.6.3mg/KgVolatile FuelsGasoline Range Organics0.012.0mg/KgClient Sample ID: 16.2-2016(47.5')Earametermg/KgLab Sample ID: 1168600014ParameterResidual Range Organics56.5Semivolatile Organic FuelsDiesel Range Organics56.5mg/KgClient Sample ID: 1168600014ParameterResidual Range Organics23.7.1mg/KgSemivolatile Organic FuelsDiesel Range Organics56.5mg/KgVolatile FuelsEthylbenzene1.3.9mg/KgVolatile FuelsEthylbenzene1.3.9mg/KgClient Sample ID: 1168600015Parameter1.3.9mg/KgSemivolatile Organic FuelsParameterResidual Range Organics3.8.3mg/KgVolatile FuelsParameterLab Sample ID: 1108600015Markmg/KgSemivolatile Organic FuelsParameterResidual Range Organics3.0.7.1mg/KgOtalie FuelsDiesel Range Organics3.0.7.1mg/KgClient Sample ID: 1108600016Parameter<	Semivolatile Organic Fuels	Diesel Range Organics	10400	mg/Kg
Volatile FueisEthylbenzene Gasoline Range Organics o Xylene0.0136.jmg/Kg mg/Kg o Xylene0.485mg/Kg mg/Kg0.485mg/Kg0.485mg/Kg0.485mg/Kg0.485mg/Kg1.00ene0.4850.0149.Jmg/Kg2.0149.JEarameter1.205.Sample ID: 1168600013ParameterSemivolatile Organic FueisDiesel Range Organics6.18.0mg/KgSemivolatile FueisGasoline Range Organics0.0212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg0.2212.Jmg/Kg1.23.3mg/Kg2.37.Jmg/Kg2.43.3Mg/Kg2.44.3Rage Organics2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg2.57.1mg/Kg <tr< th=""><th>C C</th><th>Residual Range Organics</th><th>258</th><th>mg/Kg</th></tr<>	C C	Residual Range Organics	258	mg/Kg
Gasoline Range Organics61.4mg/Kg-Xylene1.63mg/KgP & M.Xylene0.485mg/KgToluene0.0149.Jmg/KgClient Sample ID: 1168600013ParameterKesultSemivolatile Organic FuelsDiesel Range Organics18.6.Jmg/KgSemivolatile Organic FuelsDiesel Range Organics14.6.Jmg/KgClient Sample ID: 1168600014Gasoline Range Organics0.0149.Jmg/KgVolatile FuelsGasoline Range Organics0.0149.Jmg/KgClient Sample ID: 1168600014ParameterKesultJulitsSemivolatile Organic FuelsDiesel Range Organics56.5mg/KgSemivolatile Organic FuelsDiesel Range Organics56.5mg/KgSemivolatile Organic FuelsDiesel Range Organics58.3mg/KgVolatile FuelsDiesel Range Organics58.3mg/KgClient Sample ID: 1168600014ParameterKesidual Range Organics88.3mg/KgVolatile FuelsDiesel Range Organics58.3mg/KgClient Sample ID: B-2-2016(49.5')Lab Sample ID: 1168600015Mg/Kgmg/KgClient Sample ID: B-2-2016(49.5')Diesel Range Organics18.3.1mg/KgLab Sample ID: B-2-2016(49.5')Lab Sample ID: 1168600015Mg/Kgmg/KgSemivolatile Organic FuelsDiesel Range Organics18.3.1mg/KgClient Sample ID: B-3-2016(33.0')Kesidual Range Organics18.3.1mg/KgClient Sample ID: 1168600016ParameterKesidu	Volatile Fuels	Ethylbenzene	0.0136J	mg/Kg
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Lab Sample ID: 118800013 Parameter Result Units Semivolatile Organic Fuels Desel Range Organics 14.6.0 mg/Kg Residual Range Organics 5.71 mg/Kg o-Xylene 0.0212,0 mg/Kg P & M -Xylene 0.0212,0 mg/Kg Client Sample ID: B-2-2016(47.5) Lab Sample ID: 1168600014 Parameter Result Units Semivolatile Organic Fuels Diesel Range Organics 56.5 mg/Kg Residual Range Organics 56.5 mg/Kg Residual Range Organics 38.3 mg/Kg o-Xylene 1.39 mg/Kg Olesel Range Organics 38.3 mg/Kg o-Xylene 1.38 mg/Kg Client Sample ID: 1168600015 Parameter 1.39 mg/Kg Client Sample ID: B-2-2016(49.5') Lab Sample ID: 1168600015 Parameter 1.38 mg/Kg O-Xylene 1.83 mg/Kg P & M -Xylene 1.83 mg/Kg O-Xylene 1.83 mg/Kg P & M -Xylene 1.31 mg/Kg Volatile Fuels Diesel Range Organics 38.3 mg/Kg O-Xylene 1.83 mg/Kg P & M -Xylene 1.83 mg/Kg Client Sample ID: 1168600015 Parameter Range Organics 11.9,1 mg/Kg Residual Range Organics 11.9,1 mg/Kg Gasoline Range Organics 3.07,1 mg/Kg Gasoline Range Organics 3.07,1 mg/Kg Client Sample ID: 1168600015 Parameter 0.0732 mg/Kg Client Sample ID: 1168600015 Parameter 0.0732 mg/Kg Client Sample ID: 1168600015 Parameter 0.0732 mg/Kg Gasoline Range Organics 3.07,1 mg/Kg Client Sample ID: 1168600016 Parameter 0.0732 mg/Kg Gasoline Range Organics 3.07,1 mg/Kg O-Xylene 0.138 mg/Kg Volatile Fuels Diesel Range Organics 2.0,1 mg/Kg Client Sample ID: 1168600016 Parameter 0.0732 mg/Kg Gasoline Range Organics 2.0,1 mg/Kg O-Xylene 0.138 mg/Kg P & M -Xylene 0.00735,1 mg/Kg Volatile Fuels Diesel Range Organics 2.0,1 mg/Kg Gasoline Range Organics 2.0,1 mg/Kg P & M -Xylene 0.00735,1 mg/Kg P & M -Xylene 0.00735,1 mg/Kg P & M -Xylene 0.159 mg/Kg P & M -Xylene 0.253 mg/Kg	Client Sample ID: B-2-2016(36.0')			
Semivolatile Organic Fuels Diesel Range Organics 18.6.1 mg/Kg Residual Range Organics 14.6.1 mg/Kg Organics 5.71 mg/Kg P & M -Xylene 0.0462.1 mg/Kg Client Sample ID: 1168600014 <u>Parameter</u> <u>Result</u> Units Semivolatile Organic Fuels Diesel Range Organics 23.7.1 mg/Kg Gasoline Range Organics 38.3 mg/Kg Gasoline Range Organics 38.3 mg/Kg Organic Fuels Ethylbenzene 1.39 mg/Kg Gasoline Range Organics 38.3 mg/Kg Organic Fuels Diesel Range Organics 38.3 mg/Kg P & M -Xylene 1.83 mg/Kg Organic Fuels Diesel Range Organics 11.9.1 mg/Kg Toluene 0.224 mg/Kg Client Sample ID: 1168600015 <u>Parameter</u> <u>Result</u> Units Semivolatile Organic Fuels Diesel Range Organics 11.9.1 mg/Kg Residual Range Organics 3.0.7.1 mg/Kg Gasoline Range Organics 3.0.7.1 mg/Kg Client Sample ID: 1168600015 <u>Parameter</u> <u>Result</u> Units Semivolatile Fuels Diesel Range Organics 3.0.7.1 mg/Kg Gasoline Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Fuels Diesel Range Organics 3.0.7.1 mg/Kg Organic Residual Range Organics 3.1.9.1 mg/Kg Organic Fuels Diesel Range Organics 3.1.9.1 mg/Kg Organic Range Organics 3.1.9.1 mg/Kg Organic Range Organics 3.1.9.1 mg/Kg Organic Range Organics 3.1.9.1 mg/Kg Organic Range Organics 3.1.9.1 mg/Kg Organic Range Organics 3.1.9.1 mg/Kg Organic Range Organics 3.1.9.1 mg/	Lab Sample ID: 1168600013	Parameter	Result	Units
Controlation of gain of tableResidual Range Organics14.6.3mg/KgVolatile FuelsGasoline Range Organics5.71mg/KgClient Sample ID: B-2-2016(47.5')P & M - Xylene0.0462.1mg/KgLab Sample ID: 1168600014ParameterResidual Range Organics56.5mg/KgSemivolatile Organic FuelsDiesel Range Organics56.5mg/KgVolatile FuelsEthylbenzene1.39mg/KgClient Sample ID: B-2-2016(49.5')Ethylbenzene1.83mg/KgClient Sample ID: B-2-2016(49.5')Gasoline Range Organics38.3mg/KgClient Sample ID: B-2-2016(49.5')Diesel Range Organics11.9.4mg/KgLab Sample ID: B-2-2016(49.5')Diesel Range Organics11.9.4mg/KgClient Sample ID: B-2-2016(49.5')Diesel Range Organics11.9.4mg/KgLab Sample ID: 1168600015ParameterResidual Range Organics18.3.3mg/KgVolatile FuelsDiesel Range Organics11.9.4mg/KgClient Sample ID: 1168600015Parameter0.0732mg/KgGasoline Range Organics3.07.Jmg/KgClient Sample ID: 1168600016Parameter0.138mg/KgClient Sample ID: 1168600016ParameterResidual Range Organics23.6mg/KgClient Sample ID: 1168600016ParameterResidual Range Organics23.6mg/KgClient Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics23.6mg/K	Semivolatile Organic Fuels	Diesel Range Organics	18.6J	ma/Ka
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Volatile FuelsEthylbenzene1.39mg/KgGasoline Range Organics38.3mg/Kgo-Xylene1.83mg/KgP & M -Xylene4.41mg/KgToluene0.224mg/KgClient Sample ID: B-2-2016(49.5')JammeterKesidual Range OrganicsLab Sample ID: 1168600015ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics11.9Jmg/KgVolatile FuelsDiesel Range Organics18.3Jmg/KgClient Sample ID: B-3-2016(33.0')Ethylbenzene0.0732mg/KgLab Sample ID: 1168600016ParameterResultUnitsGasoline Range Organics3.07Jmg/KgO-Xylene0.151mg/KgP & M -Xylene0.151mg/KgVolatile FuelsDiesel Range Organics28.6mg/KgVolatile FuelsDiesel Range Organics28.6mg/KgVolatile FuelsDiesel Range Organics23.1mg/KgVolatile FuelsDiesel Range Organics23.1mg/KgVolatile FuelsBenzene0.00735Jmg/KgVolatile FuelsBenzene0.00735Jmg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.246Jmg/Kg	Semivolatile Organic Fuels	Diesei Range Organics	23.71	mg/Kg
Volatile FuelsLitylde/L2ne1.33Intg/kgGasoline Range Organics38.3mg/kgo-Xylene1.83mg/kgP & M -Xylene4.41mg/kgToluene0.224mg/kgClient Sample ID: B-2-2016(49.5')Lab Sample ID: 1168600015ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics11.9Jmg/kgVolatile FuelsEthylbenzene0.0732mg/kgGasoline Range Organics3.07Jmg/kgo-Xylene0.138mg/kgo-Xylene0.138mg/kgClient Sample ID: B-3-2016(33.0')Lab Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/kgVolatile FuelsDiesel Range Organics23.1mg/kgVolatile FuelsDiesel Range Organics3.19Jmg/kgVolatile FuelsDiesel Range Organics3.19Jmg/kgVolatile FuelsDiesel Range Organics3.19Jmg/kgVolatile FuelsBenzene0.00735Jmg/kgexclude Range Organics3.19Jmg/kgexclude Range Organics3.19Jmg/kg-Xylene1.59mg/kgexclude Range Organics3.19Jmg/kgexclude Range Organics3.19Jmg/kgexclude Range Organics3.19Jmg/kgexclude Range Organics3.19Jmg/kgexclude Range Organics3.19Jmg		Ethylbonzono	23.73	mg/Kg
Clashine Kange Organics38.3ing/Kgo-Xylene1.83mg/KgP & M -Xylene4.41mg/KgToluene0.224mg/KgClient Sample ID: 1168600015ParameterKesultUnitsSemivolatile Organic FuelsDiesel Range Organics11.9.Jmg/KgVolatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07.Jmg/Kgo-Xylene0.138mg/Kgo-Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')Jesel Range Organics3.07.JLab Sample ID: 1168600016ParameterKesultUnitsSemivolatile Organic FuelsDiesel Range Organics3.07.Jmg/KgClient Sample ID: B-3-2016(33.0')Jesel Range Organics28.6mg/KgLab Sample ID: 1168600016ParameterResidual Range Organics23.1mg/KgVolatile FuelsDiesel Range Organics23.1mg/KgGasoline Range Organics3.19.Jmg/KgGasoline Range Organics3.19.Jmg/KgVolatile FuelsBenzene0.00735.Jmg/KgGasoline Range Organics3.19.Jmg/KgP & M -Xylene0.159mg/KgGasoline Range Organics3.19.Jmg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.253mg/KgClient Sample ID: L106600016Parameter0.253mg/KgP & M -Xylene0.253mg/KgMg/KgMg/KgO = 100000000000000000000000000000000000	volatile Fuels		1.39	mg/Kg
Client Sample ID: B-2-2016(49.5') Lab Sample ID: 1168600015 Parameter Result Units Semivolatile Organic Fuels Diesel Range Organics 11.9.J mg/Kg Residual Range Organics 18.3.J mg/Kg Volatile Fuels Ethylbenzene 0.0732 mg/Kg Gasoline Range Organics 3.07.J mg/Kg O-Xylene 0.151 mg/Kg Client Sample ID: B-3-2016(33.0') Lab Sample ID: 1168600016 Parameter Ethylene Semivolatile Organic Fuels Diesel Range Organics 28.6 mg/Kg Nolatile Fuels Diesel Range Organics 23.1 mg/Kg Diesel Range Organics 23.1 mg/Kg Nolatile Fuels Diesel Range Organics 3.01,1 mg/Kg O-Xylene 0.00735J mg/Kg Residual Range Organics 3.01,1 mg/Kg Client Sample ID: B-3-2016(33.0') Lab Sample ID: 1168600016 Parameter Senivolatile Organic Fuels Diesel Range Organics 28.6 mg/Kg Residual Range Organics 3.11 mg/Kg O-Xylene 0.00735J mg/Kg Residual Range Organics 3.19,1 mg/Kg O-Xylene 0.159 mg/Kg P & M -Xylene 0.159 mg/Kg P & M -Xylene 0.253 mg/Kg			1 02	mg/Kg
Client Sample ID:B-2-2016(49.5')Ing/KgLab Sample ID:1168600015ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics18.3Jmg/KgVolatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07Jmg/Kgo-Xylene0.138mg/KgClient Sample ID:B-3-2016(33.0')HarmeterLab Sample ID:B-3-2016(33.0')EarameterResidual Range OrganicsClient Sample ID:B-3-2016(33.0')Diesel Range Organics28.6Semivolatile Organic FuelsDiesel Range Organics28.6mg/KgVolatile FuelsBenzene0.00735Jmg/KgGasoline Range Organics23.1mg/KgP & M -Xylene0.00735Jmg/KgP & M -Xylene0.00735Jmg/KgP & M -Xylene0.00735Jmg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.0246Jmg/Kg			1.05	mg/Kg
Client Sample ID: B-2-2016(49.5') Lab Sample ID: 1168600015 Parameter Result Units Semivolatile Organic Fuels Diesel Range Organics 18.3J mg/Kg Residual Range Organics 18.3J mg/Kg Gasoline Range Organics 3.07J mg/Kg Gasoline Range Organics 3.07J mg/Kg o-Xylene 0.138 mg/Kg P & M -Xylene 0.151 mg/Kg Client Sample ID: B-3-2016(33.0') Lab Sample ID: 1168600016 Parameter Result Units Semivolatile Organic Fuels Diesel Range Organics 28.6 mg/Kg Residual Range Organics 23.1 mg/Kg Volatile Fuels Benzene 0.00735J mg/Kg Gasoline Range Organics 3.19J mg/Kg Gasoline Range Organics 3.19J mg/Kg Gasoline Range Organics 3.19J mg/Kg			4.41	mg/Kg
Client Sample ID:B-2-2016(49.5')Lab Sample ID:1168600015ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics11.9Jmg/KgVolatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07Jmg/Kgo-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID:B-3-2016(33.0')EarameterKesultLab Sample ID:11.68600016ParameterResidual Range Organics28.6Semivolatile Organic FuelsDiesel Range Organics23.1mg/KgVolatile FuelsBenzene0.00735Jmg/KgVolatile FuelsBenzene0.00735Jmg/KgVolatile FuelsBenzene0.00735Jmg/KgP & M -Xylene0.159mg/KgFuelsBenzene0.00735Jmg/KgFuelsBenzene0.00735Jmg/KgP & M -Xylene0.159mg/KgFuelsP & M -Xylene0.253mg/KgFuelsFuels0.0246Jmg/Kg		Toldene	0.224	ilig/itg
Lab Sample ID: 1168600015ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics11.9.Jmg/KgVolatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07.Jmg/Kgo-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/KgVolatile FuelsDiesel Range Organics23.1mg/KgVolatile FuelsBenzene0.00735Jmg/KgVolatile FuelsGasoline Range Organics3.19.Jmg/KgP & M -Xylene0.00735Jmg/KgMg/KgVolatile FuelsBenzene0.00735Jmg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.159mg/KgP & M -Xylene0.253mg/KgP & M -Xylene0.0246Jmg/Kg	Client Sample ID: B-2-2016(49.5')			
Semivolatile Organic FuelsDiesel Range Organics11.9.Jmg/KgResidual Range Organics18.3.Jmg/KgVolatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07.Jmg/Kgo-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')HarameterKesultLab Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/KgVolatile FuelsBenzene0.00735Jmg/KgGasoline Range Organics3.19.Jmg/Kgo-Xylene0.159mg/KgP & M -Xylene0.159mg/KgToluene0.0246Jmg/Kg	Lab Sample ID: 1168600015	Parameter	<u>Result</u>	<u>Units</u>
Residual Range Organics18.3Jmg/KgVolatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07Jmg/Kgo-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')EELab Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/KgVolatile FuelsBenzene0.00735Jmg/KgGasoline Range Organics3.19Jmg/Kgo-Xylene0.159mg/Kgo-Xylene0.159mg/KgP & M -Xylene0.253mg/KgToluene0.0246Jmg/Kg	Semivolatile Organic Fuels	Diesel Range Organics	11.9J	mg/Kg
Volatile FuelsEthylbenzene0.0732mg/KgGasoline Range Organics3.07Jmg/Kgo-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')Lab Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/KgVolatile FuelsBenzene0.00735Jmg/KgGasoline Range Organics3.19Jmg/KgVolatile FuelsP & M -Xylene0.159mg/KgP & M -Xylene0.159mg/KgToluene0.0246Jmg/Kg		Residual Range Organics	18.3J	mg/Kg
Gasoline Range Organics3.07Jmg/Kgo-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')Lab Sample ID: 1168600016ParameterKesultSemivolatile Organic FuelsDiesel Range Organics28.6Residual Range Organics23.1mg/KgVolatile FuelsBenzene0.00735JGasoline Range Organics3.19Jmg/Kgo-Xylene0.159mg/Kgp & M -Xylene0.253mg/KgToluene0.0246Jmg/Kg	Volatile Fuels	Ethylbenzene	0.0732	mg/Kg
o-Xylene0.138mg/KgP & M -Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')Lab Sample ID: 1168600016ParameterKesultSemivolatile Organic FuelsDiesel Range Organics28.6Residual Range Organics23.1mg/KgVolatile FuelsBenzene0.00735JGasoline Range Organics3.19Jmg/Kgo-Xylene0.159mg/KgP & M -Xylene0.253mg/KgToluene0.0246Jmg/Kg		Gasoline Range Organics	3.07J	mg/Kg
P & M -Xylene0.151mg/KgClient Sample ID: B-3-2016(33.0')Lab Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/KgResidual Range Organics23.1mg/KgVolatile FuelsBenzene0.00735Jmg/KgGasoline Range Organics3.19Jmg/Kgo-Xylene0.159mg/KgP & M -Xylene0.253mg/KgToluene0.0246Jmg/Kg		o-Xylene	0.138	mg/Kg
Client Sample ID: B-3-2016(33.0') Parameter Result Units Lab Sample ID: 1168600016 Parameter 28.6 mg/Kg Semivolatile Organic Fuels Diesel Range Organics 23.1 mg/Kg Volatile Fuels Benzene 0.00735J mg/Kg Gasoline Range Organics 3.19J mg/Kg P & M -Xylene 0.159 mg/Kg Toluene 0.0246J mg/Kg		P & M -Xylene	0.151	mg/Kg
Lab Sample ID: 1168600016ParameterResultUnitsSemivolatile Organic FuelsDiesel Range Organics28.6mg/KgVolatile FuelsBenzene0.00735Jmg/KgKoline Range Organics3.19Jmg/KgVolatile FuelsP & M -Xylene0.253mg/KgToluene0.0246Jmg/Kg	Client Sample ID: B-3-2016(33.0')			
Semivolatile Organic FuelsDiesel Range Organics28.6mg/KgResidual Range Organics23.1mg/KgVolatile FuelsBenzene0.00735Jmg/KgGasoline Range Organics3.19Jmg/Kgo-Xylene0.159mg/KgP & M -Xylene0.253mg/KgToluene0.0246Jmg/Kg	Lab Sample ID: 1168600016	Parameter_	<u>Result</u>	<u>Units</u>
Residual Range Organics 23.1 mg/Kg Volatile Fuels Benzene 0.00735J mg/Kg Gasoline Range Organics 3.19J mg/Kg o-Xylene 0.159 mg/Kg P & M -Xylene 0.253 mg/Kg Toluene 0.0246J mg/Kg	Semivolatile Organic Fuels	Diesel Range Organics	28.6	mg/Kg
Volatile Fuels Benzene 0.00735J mg/Kg Gasoline Range Organics 3.19J mg/Kg o-Xylene 0.159 mg/Kg P & M -Xylene 0.253 mg/Kg Toluene 0.0246J mg/Kg		Residual Range Organics	23.1	mg/Kg
Gasoline Range Organics 3.19J mg/Kg o-Xylene 0.159 mg/Kg P & M -Xylene 0.253 mg/Kg Toluene 0.0246J mg/Kg	Volatile Fuels	Benzene	0.00735J	mg/Kg
o-Xylene 0.159 mg/Kg P & M -Xylene 0.253 mg/Kg Toluene 0.0246J mg/Kg		Gasoline Range Organics	3.19J	mg/Kg
P & M -Xylene 0.253 mg/Kg Toluene 0.0246J mg/Kg		o-Xylene	0.159	mg/Kg
Toluene 0.0246J mg/Kg		P & M -Xylene	0.253	mg/Kg
		Toluene	0.0246J	mg/Kg

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Client Sample ID: B-4-2016(11.0')			
Lab Sample ID: 1168600017	Parameter	Result	Units
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	39.2	mg/Kg
-	2-Methylnaphthalene	47.8	mg/Kg
	Anthracene	0.578	mg/Kg
	Fluorene	2.40	mg/Kg
	Naphthalene	40.4	mg/Kg
	Phenanthrene	2.23	mg/Kg
	Pyrene	0.109J	mg/Kg
Semivolatile Organic Fuels	Diesel Range Organics	9550	mg/Kg
	Residual Range Organics	175	mg/Kg
Volatile Fuels	Benzene	0.418J	mg/Kg
	Ethylbenzene	1.01	mg/Kg
	Gasoline Range Organics	3400	mg/Kg
	o-Xylene	726	mg/Kg
	P & M -Xylene	1080	mg/Kg
	Toluene	3.62	mg/Kg
Client Sample ID: B-4-2016(35.0')			
Lab Sample ID: 1168600018	Baramotor	Popult	Unite
Somivolatilo Organic Euols	<u>Parameter</u> Diesel Range Organics	<u>487</u>	ma/Ka
Sennvolatile Organic I dels	Residual Range Organics	63.7	mg/Kg
Volatilo Euole	Gasoline Range Organics	2 77.1	mg/Kg
Volatile i dels	o-Xylene	0 154	mg/Kg
	P & M -Xvlene	0.251	ma/Ka
	Toluene	0.0137.1	mg/Kg
	louene	0.01070	iiig/itg
Client Sample ID: B-1001			
Lab Sample ID: 1168600019	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	35.7	mg/Kg
	2-Methylnaphthalene	42.9	mg/Kg
	Anthracene	0.506	mg/Kg
	Fluorene	2.17	mg/Kg
	Naphthalene	36.7	mg/Kg
	Phenanthrene	2.08	mg/Kg
	Pyrene	0.112J	mg/Kg
Client Sample ID: B-1002			
Lab Sample ID: 1168600020	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Semivolatile Organic Fuels	Diesel Range Organics	600	mg/Kg
-	Residual Range Organics	22.5	mg/Kg
Volatile Fuels	Ethylbenzene	0.0419	mg/Kg
	Gasoline Range Organics	17.4	mg/Kg
	o-Xylene	0.159	mg/Kg
	P & M -Xylene	0.0678	mg/Kg

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Client Sample ID: Trip Blank Lab Sample ID: 1168600022 Volatile Fuels

<u>Parameter</u>	<u>Result</u>	Units
Gasoline Range Organics	0.802J	mg/Kg
o-Xylene	0.00881J	mg/Kg
P & M -Xylene	0.0215J	mg/Kg

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Results of B-1-2016(9-15-16)							
Client Sample ID: B-1-2016(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600001 Lab Project ID: 1168600			Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 09/15/ ite: 09/20/ [:] r (Surface,	16 20:00 16 09:57 Eff., Gro	und)	
Results by Semivolatile Organic Fuels	;						
						Allowable	
Parameter_	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Limits	Date Analyzed
Diesel Range Organics	0.338 J	0.566	0.170	mg/L	1		09/29/16 17:20
Surrogates							
5a Androstane (surr)	97.5	50-150		%	1		09/29/16 17:20
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK102 Analyst: CRA Analytical Date/Time: 09/29/16 17:20 Container ID: 1168600001-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 265 Vol: 1 mL	; 16 09:43 5 mL		
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	Limits	Date Analyzed
Residual Range Organics	0.236 U	0.472	0.142	mg/L	1		09/29/16 17:20
Surrogates							
n-Triacontane-d62 (surr)	92.2	50-150		%	1		09/29/16 17:20
L							
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK103 Analyst: CRA Analytical Date/Time: 09/29/16 17:20 Container ID: 1168600001-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 265 Vol: 1 mL) 6 09:43 6 mL		

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Results of B-1-2016(9-15-16)							
Client Sample ID: B-1-2016(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600001 Lab Project ID: 1168600		C R M S L	ollection Da eceived Da latrix: Water olids (%): ocation:	tte: 09/15/ te: 09/20/1 r (Surface,	16 20:00 16 09:57 Eff., Gro	und)	
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/27/16 16:52
Surrogates							
4-Bromofluorobenzene (surr)	86.2	50-150		%	1		09/27/16 16:52
Batch Information							
Analytical Batch: VFC13331 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 16:52 Container ID: 1168600001-A		F F F F	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030B me: 09/27/1 /t./Vol.: 5 m Vol: 5 mL	6 06:00 L		
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Benzene	0.250 U	0.500	0.150	ug/L	1		09/27/16 16:52
	0.500 0	1.00	0.310	ug/L	1		09/27/16 16:52
P & M -Xvlene	1.00 U	2.00	0.620	ug/L	1		09/27/16 16:52
Toluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 16:52
Surrogates							
1,4-Difluorobenzene (surr)	95.9	77-115		%	1		09/27/16 16:52
Batch Information							
Analytical Batch: VFC13331 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 16:52 Container ID: 1168600001-A		F F F	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030B me: 09/27/1 /t./Vol.: 5 m Vol: 5 mL	6 06:00 L		
Print Date: 10/10/2016 11:35:53AM						Iflaggin	a is activated

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Results of B-6-2016(9-16-16)							
Client Sample ID: B-6-2016(9-16-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600002 Lab Project ID: 1168600			Collection Da Received Da Matrix: Water Solids (%): Location:	ate: 09/16/ te: 09/20/1 r (Surface,	16 12:50 6 09:57 Eff., Gro	und)	
Results by Semivolatile Organic Fuels							
Parameter Diesel Range Organics	<u>Result Qual</u> 0.363 J	<u>LOQ/CL</u> 0.688	<u>DL</u> 0.206	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyzed</u> 09/29/16 17:30
5a Androstane (surr)	106	50-150		%	1		09/29/16 17·30
	100			70	·		00,20,10 11.00
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK102 Analyst: CRA Analytical Date/Time: 09/29/16 17:30 Container ID: 1168600002-D			Prep Batch: Prep Method Prep Date/Tin Prep Initial W Prep Extract	XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 218 Vol: 1 mL	6 09:43 mL		
<u>Parameter</u> Residual Range Organics	<u>Result Qual</u> 0.286 U	<u>LOQ/CL</u> 0.573	<u>DL</u> 0.172	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/29/16 17:30
Surrogates							
n-Triacontane-d62 (surr)	104	50-150		%	1		09/29/16 17:30
Patch Information							
Analytical Batch: XFC12888 Analytical Method: AK103 Analyst: CRA Analytical Date/Time: 09/29/16 17:30 Container ID: 1168600002-D		Prep Batch: XXX36396 Prep Method: SW3520C Prep Date/Time: 09/27/16 09:43 Prep Initial Wt./Vol.: 218 mL Prep Extract Vol: 1 mL					

200 West Potter Drive Anchorage, AK 95518 t 907.562.2343 f 907.561.5301 www.us.sgs.com

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Results of B-6-2016(9-16-16)							
Client Sample ID: B-6-2016(9-16-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600002 Lab Project ID: 1168600		C R M S Lu	ollection Da eceived Da latrix: Water olids (%): ocation:	ate: 09/16/ te: 09/20/ [,] r (Surface,	16 12:50 16 09:57 Eff., Gro	und)	
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyzed</u> 09/27/16 17:11
Surrogates							
4-Bromofluorobenzene (surr)	86	50-150		%	1		09/27/16 17:11
Batch Information							
Analytical Batch: VFC13331 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 17:11 Container ID: 1168600002-A		i i i i i i i i i i i i i i i i i i i	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030B me: 09/27/1 /t./Vol.: 5 m Vol: 5 mL	6 06:00 L		
						Allowable	
Parameter	Result Qual	<u>LOQ/CL</u>	<u>DL</u> 0.150	<u>Units</u>	DF 1	<u>Limits</u>	Date Analyzed
Benzene	0.250 0	0.500	0.150	ug/L	1		09/27/16 17:11
o-Xvlene	0.500 U	1.00	0.310	ug/L	1		09/27/16 17:11
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/27/16 17:11
Toluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 17:11
Surrogates							
1,4-Difluorobenzene (surr)	92.1	77-115		%	1		09/27/16 17:11
Batch Information							
Analytical Batch: VFC13331 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 17:11 Container ID: 1168600002-A		i i i i i i i i i i i i i i i i i i i	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030B me: 09/27/1 /t./Vol.: 5 m Vol: 5 mL	6 06:00 L		
Print Date: 10/10/2016 11:35:53AM						J flaggin	g is activated



Results of B-2-2016(9-15-16)

Client Sample ID: B-2-2016(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600003 Lab Project ID: 1168600 Collection Date: 09/15/16 19:10 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Polynuclear Aromatics GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1-Methylnaphthalene	0.731	0.0539	0.0162	ug/L	1		09/23/16 08:25
2-Methylnaphthalene	0.279	0.0539	0.0162	ug/L	1		09/23/16 08:25
Acenaphthene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Acenaphthylene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Anthracene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Benzo(a)Anthracene	0.0166 J	0.0539	0.0162	ug/L	1		09/23/16 08:25
Benzo[a]pyrene	0.0110 J	0.0216	0.00668	ug/L	1		09/23/16 08:25
Benzo[b]Fluoranthene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Benzo[g,h,i]perylene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Benzo[k]fluoranthene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Chrysene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Dibenzo[a,h]anthracene	0.0119 J	0.0216	0.00668	ug/L	1		09/23/16 08:25
Fluoranthene	0.0172 J	0.0539	0.0162	ug/L	1		09/23/16 08:25
Fluorene	0.0288 J	0.0539	0.0162	ug/L	1		09/23/16 08:25
Indeno[1,2,3-c,d] pyrene	0.0270 U	0.0539	0.0162	ug/L	1		09/23/16 08:25
Naphthalene	0.234	0.108	0.0334	ug/L	1		09/23/16 08:25
Phenanthrene	0.0310 J	0.0539	0.0162	ug/L	1		09/23/16 08:25
Pyrene	0.0202 J	0.0539	0.0162	ug/L	1		09/23/16 08:25
Surrogates							
2-Fluorobiphenyl (surr)	92.7	53-106		%	1		09/23/16 08:25
Terphenyl-d14 (surr)	89.7	58-132		%	1		09/23/16 08:25

Batch Information

Analytical Batch: XMS9632 Analytical Method: 8270D SIM LV (PAH) Analyst: S.G Analytical Date/Time: 09/23/16 08:25 Container ID: 1168600003-F Prep Batch: XXX36351 Prep Method: SW3520C Prep Date/Time: 09/21/16 08:46 Prep Initial Wt./Vol.: 232 mL Prep Extract Vol: 1 mL

Print Date: 10/10/2016 11:35:53AM

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Results of B-2-2016(9-15-16)							
Client Sample ID: B-2-2016(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600003 Lab Project ID: 1168600			Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 09/15/ ate: 09/20/ [.] r (Surface,	16 19:10 16 09:57 Eff., Gro	und)	
Results by Semivolatile Organic Fuels	;						
<u>Parameter</u> Diesel Range Organics	<u>Result</u> Qual 1.11	<u>LOQ/CL</u> 0.636	<u>DL</u> 0.191	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/29/16 17:59
Surrogates							
5a Androstane (surr)	104	50-150		%	1		09/29/16 17:59
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK102 Analyst: CRA Analytical Date/Time: 09/29/16 17:59 Container ID: 1168600003-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX36396 I: SW3520C me: 09/27/1 Vt./Vol.: 236 Vol: 1 mL	C 16 09:43 5 mL		
<u>Parameter</u> Residual Range Organics	<u>Result Qual</u> 0.265 U	<u>LOQ/CL</u> 0.530	<u>DL</u> 0.159	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/29/16 17:59
Surrogates							
n-Triacontane-d62 (surr)	99.9	50-150		%	1		09/29/16 17:59
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK103 Analyst: CRA Analytical Date/Time: 09/29/16 17:59 Container ID: 1168600003-D		Prep Batch: XXX36396 Prep Method: SW3520C Prep Date/Time: 09/27/16 09:43 Prep Initial Wt./Vol.: 236 mL Prep Extract Vol: 1 mL				·	

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Results of B-2-2016(9-15-16)							
Client Sample ID: B-2-2016(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600003 Lab Project ID: 1168600		C R M Si La	ollection Da eceived Da atrix: Water olids (%): ocation:	tte: 09/15/ te: 09/20/1 r (Surface,	16 19:10 I6 09:57 Eff., Grou	und)	
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.0354 J	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/27/16 17:29
Surrogates							
4-Bromofluorobenzene (surr)	85.5	50-150		%	1		09/27/16 17:29
Batch Information							
Analytical Batch: VFC13331 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 17:29 Container ID: 1168600003-A		F F F F	Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030B me: 09/27/1 /t./Vol.: 5 m Vol: 5 mL	6 06:00 L		
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u> 0.150	<u>Units</u>	DF 1	<u>Limits</u>	Date Analyzed
Benzene Ethylbenzene	0.250 0	0.500	0.150	ug/L	1		09/27/16 17:29
o-Xvlene	0.500 U	1.00	0.310	ug/L	1		09/27/16 17:29
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/27/16 17:29
Toluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 17:29
Surrogates							
1,4-Difluorobenzene (surr)	98.1	77-115		%	1		09/27/16 17:29
Batch Information							
Analytical Batch: VFC13331 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 17:29 Container ID: 1168600003-A		F F F F	Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030B me: 09/27/1 /t./Vol.: 5 m Vol: 5 mL	6 06:00 L		
Print Date: 10/10/2016 11:35:53AM						.l flaggin	n is activated



Results of B-1004

Client Sample ID: **B-1004** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600004 Lab Project ID: 1168600 Collection Date: 09/15/16 19:40 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Polynuclear Aromatics GC/MS

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1-Methylnaphthalene	0.796	0.0512	0.0154	ug/L	1		09/23/16 08:47
2-Methylnaphthalene	0.292	0.0512	0.0154	ug/L	1		09/23/16 08:47
Acenaphthene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Acenaphthylene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Anthracene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Benzo(a)Anthracene	0.0166 J	0.0512	0.0154	ug/L	1		09/23/16 08:47
Benzo[a]pyrene	0.0104 J	0.0205	0.00635	ug/L	1		09/23/16 08:47
Benzo[b]Fluoranthene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Benzo[g,h,i]perylene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Benzo[k]fluoranthene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Chrysene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Dibenzo[a,h]anthracene	0.0122 J	0.0205	0.00635	ug/L	1		09/23/16 08:47
Fluoranthene	0.0156 J	0.0512	0.0154	ug/L	1		09/23/16 08:47
Fluorene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Indeno[1,2,3-c,d] pyrene	0.0256 U	0.0512	0.0154	ug/L	1		09/23/16 08:47
Naphthalene	0.236	0.102	0.0318	ug/L	1		09/23/16 08:47
Phenanthrene	0.0315 J	0.0512	0.0154	ug/L	1		09/23/16 08:47
Pyrene	0.0182 J	0.0512	0.0154	ug/L	1		09/23/16 08:47
Surrogates							
2-Fluorobiphenyl (surr)	83.6	53-106		%	1		09/23/16 08:47
Terphenyl-d14 (surr)	80.1	58-132		%	1		09/23/16 08:47

Batch Information

Analytical Batch: XMS9632 Analytical Method: 8270D SIM LV (PAH) Analyst: S.G Analytical Date/Time: 09/23/16 08:47 Container ID: 1168600004-F Prep Batch: XXX36351 Prep Method: SW3520C Prep Date/Time: 09/21/16 08:46 Prep Initial Wt./Vol.: 244 mL Prep Extract Vol: 1 mL

Print Date: 10/10/2016 11:35:53AM

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Results of B-1004							
Client Sample ID: B-1004 Client Project ID: Interior Texaco Lab Sample ID: 1168600004 Lab Project ID: 1168600		C R S L	collection Da deceived Da latrix: Wate olids (%): ocation:	ate: 09/15/ te: 09/20/ [/] r (Surface,	16 19:40 16 09:57 Eff., Gro	und)	
Results by Semivolatile Organic Fuels	5						
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	Allowable Limits	Date Analyzed
Diesel Range Organics	1.04	0.636	0.191	mg/L	1		09/29/16 18:09
Surrogates							
5a Androstane (surr)	105	50-150		%	1		09/29/16 18:09
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK102 Analyst: CRA Analytical Date/Time: 09/29/16 18:09 Container ID: 1168600004-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 236 Vol: 1 mL	; 16 09:43 5 mL		
<u>Parameter</u> Residual Range Organics	<u>Result Qual</u> 0.265 U	<u>LOQ/CL</u> 0.530	<u>DL</u> 0.159	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	Date Analyzed 09/29/16 18:09
Surrogates							
n-Triacontane-d62 (surr)	103	50-150		%	1		09/29/16 18:09
Batch Information							
Analytical Batch: XFC12888 Analytical Method: AK103 Analyst: CRA Analytical Date/Time: 09/29/16 18:09 Container ID: 1168600004-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 236 Vol: 1 mL	; 16 09:43 5 mL		
Print Date: 10/10/2016 11:35:53AM						J flaqqin	q is activated

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Results of B-1004 Client Sample ID: B-1004 Client Project ID: Interior Texaco Lab Sample ID: 1168600004 Lab Project ID: 1168600	C R M S	collection Da leceived Da latrix: Water olids (%): ocation:	ate: 09/15/ te: 09/20/ ⁻ r (Surface,	16 19:40 16 09:57 Eff., Gro	und)		
Results by Volatile Fuels							
						Allowable	
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Limits	Date Analyze
Gasoline Range Organics	0.0315 J	0.100	0.0310	mg/L	1		09/27/16 17:4
urrogates							
4-Bromofluorobenzene (surr)	87.4	50-150		%	1		09/27/16 17:4
Analytical Batch: VFC13331 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 17:48 Container ID: 1168600004-A		F F F F	Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030E me: 09/27/ /t./Vol.: 5 m Vol: 5 mL	8 16 06:00 L		
						Allowable	
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	Limits	Date Analyze
Benzene	0.250 U	0.500	0.150	ug/L	1		09/27/16 17:4
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 17:4
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/27/16 17:4
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/27/16 17:4
Ioluene	0.500 0	1.00	0.310	ug/L	1		09/27/16 17:4
urrogates							
1,4-Difluorobenzene (surr)	94.9	77-115		%	1		09/27/16 17:4
Batch Information							
Analytical Batch: VFC13331 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 17:48 Container ID: 1168600004-A		F F F	Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29647 : SW5030E me: 09/27/′ /t./Vol.: 5 m Vol: 5 mL	8 16 06:00 IL		

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Results of KACI(9-15-16)							
Client Sample ID: KACI(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600005 Lab Project ID: 1168600		C F M S L	Collection Da Received Da Matrix: Wate Solids (%): .ocation:	ate: 09/15/ te: 09/20/ [/] r (Surface,	16 18:15 16 09:57 Eff., Grot	und)	
Results by Semivolatile Organic Fuels	5		_				
<u>Parameter</u> Diesel Range Organics Surrogates	<u>Result Qual</u> 0.276 J	<u>LOQ/CL</u> 0.641	<u>DL</u> 0.192	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/29/16 18:18
5a Androstane (surr)	92.3	50-150		%	1		09/29/16 18:18
Batch Information Analytical Batch: XFC12888 Analytical Method: AK102 Analyst: CRA Analytical Date/Time: 09/29/16 18:18 Container ID: 1168600005-D			Prep Batch: Prep Method Prep Date/Tii Prep Initial W Prep Extract	XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 234 Vol: 1 mL	; 16 09:43 • mL		
						Allowable	
			D 1	1.1.14		1	
Parameter Residual Range Organics	<u>Result Qual</u> 0.267 U	<u>LOQ/CL</u> 0.534	<u>DL</u> 0.160	<u>Units</u> mg/L	<u>DF</u> 1	<u>Limits</u>	Date Analyzed 09/29/16 18:18
Parameter Residual Range Organics Surrogates	<u>Result Qual</u> 0.267 U	<u>LOQ/CL</u> 0.534	<u>DL</u> 0.160	<u>Units</u> mg/L	<u>DF</u> 1	<u>Limits</u>	Date Analyzed 09/29/16 18:18
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr)	<u>Result Qual</u> 0.267 U 91.9	<u>LOQ/CL</u> 0.534 50-150	<u>DL</u> 0.160	<u>Units</u> mg/L %	<u>DF</u> 1 1	<u>Limits</u>	Date Analyzed 09/29/16 18:18 09/29/16 18:18
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information	<u>Result Qual</u> 0.267 U 91.9	LOQ/CL 0.534 50-150	<u>DL</u> 0.160	<u>Units</u> mg/L %	<u>DF</u> 1 1	Limits	Date Analyzed 09/29/16 18:18 09/29/16 18:18
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12888 Analytical Method: AK103 Analyst: CRA Analytical Date/Time: 09/29/16 18:18 Container ID: 1168600005-D	<u>Result Qual</u> 0.267 U 91.9	LOQ/CL 0.534 50-150	DL 0.160 Prep Batch: Prep Method Prep Date/Tii Prep Initial W Prep Extract	<u>Units</u> mg/L % XXX36396 : SW3520C me: 09/27/1 /t./Vol.: 234 Vol: 1 mL	<u>DF</u> 1 1 () () () () () () () () () () () () ()	Limits	Date Analyzed 09/29/16 18:18 09/29/16 18:18

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Client Sample ID: KACI(9-15-16) Client Project ID: Interior Texaco Lab Sample ID: 1168600005 Lab Project ID: 1168600	ť	C R M Si	ollection Da eceived Dat atrix: Water olids (%): ocation:	te: 09/15/ :e: 09/20/ [,] (Surface,	16 18:15 16 09:57 Eff., Gro	und)	
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 09/27/16 18:0
urrogates							
I-Bromofluorobenzene (surr)	90.3	50-150		%	1		09/27/16 18:0
Batch Information							
Analytical Batch: VFC13331 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 18:07 Container ID: 1168600005-A		F F F F	Prep Batch: ` Prep Method: Prep Date/Tir Prep Initial W Prep Extract `	VXX29647 SW5030B ne: 09/27/1 t./Vol.: 5 m Vol: 5 mL	8 16 06:00 L		
Parameter Benzene	<u>Result Qual</u> 0.250 U	<u>LOQ/CL</u> 0.500	<u>DL</u> 0.150	<u>Units</u> ug/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 09/27/16 18:0
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 18:
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/27/16 18:
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/27/16 18:
loluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 18:
u rrogates I,4-Difluorobenzene (surr)	93.5	77-115		%	1		09/27/16 18:
Batch InformationAnalytical Batch: VFC13331Analytical Method: SW8021BAnalyst: STAnalytical Date/Time: 09/27/16 18:07Container ID: 1168600005-A		F F F	Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29647 SW5030B ne: 09/27/1 t./Vol.: 5 m Vol: 5 mL	6 16 06:00 L		



Results of KACI(9-15-16)

Client Sample ID: **KACI(9-15-16)** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600005 Lab Project ID: 1168600 Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
1,1,1-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,1,2,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
1,1,2-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,1-Dichloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,1-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,1-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2,3-Trichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2,3-Trichloropropane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2,4-Trichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2,4-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2-Dibromo-3-chloropropane	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
1,2-Dibromoethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2-Dichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,2-Dichloroethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
1,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,3,5-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,3-Dichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
1,3-Dichloropropane	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
1,4-Dichlorobenzene	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
2,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
2-Butanone (MEK)	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
2-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
2-Hexanone	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
4-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
4-Isopropyltoluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
4-Methyl-2-pentanone (MIBK)	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
Benzene	0.200 U	0.400	0.120	ug/L	1		09/21/16 17:56
Bromobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Bromochloromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Bromodichloromethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
Bromoform	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Bromomethane	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
Carbon disulfide	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
Carbon tetrachloride	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Chlorobenzene	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
Chloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56

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Results of KACI(9-15-16)

Client Sample ID: **KACI(9-15-16)** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600005 Lab Project ID: 1168600

Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	<u>Result Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Chloroform	0.500 U	1.00	0.300	ug/L	1		09/21/16 17:56
Chloromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
cis-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
cis-1,3-Dichloropropene	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
Dibromochloromethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 17:56
Dibromomethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Dichlorodifluoromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Freon-113	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
Hexachlorobutadiene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Isopropylbenzene (Cumene)	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Methylene chloride	2.50 U	5.00	1.00	ug/L	1		09/21/16 17:56
Methyl-t-butyl ether	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
Naphthalene	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
n-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
n-Propylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/21/16 17:56
sec-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Styrene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
tert-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Tetrachloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Toluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
trans-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
trans-1,3-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Trichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Trichlorofluoromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Vinyl acetate	5.00 U	10.0	3.10	ug/L	1		09/21/16 17:56
Vinyl chloride	0.500 U	1.00	0.310	ug/L	1		09/21/16 17:56
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		09/21/16 17:56
Surrogates				-			
1 2-Dichloroethane-D4 (surr)	110	81-118		%	1		09/21/16 17:56
4-Bromofluorobenzene (surr)	90.8	85-114		%	1		09/21/16 17:56
Toluene-d8 (surr)	103	80_112		%	1		09/21/16 17:56
	105	00-112		/0			55/21/10 17.50

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Results of KACI(9-15-16)

Client Sample ID: **KACI(9-15-16)** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600005 Lab Project ID: 1168600 Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS16214 Analytical Method: SW8260B Analyst: TJT Analytical Date/Time: 09/21/16 17:56 Container ID: 1168600005-F Prep Batch: VXX29621 Prep Method: SW5030B Prep Date/Time: 09/21/16 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

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Results of B-1003

Client Sample ID: **B-1003** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600006 Lab Project ID: 1168600

Collection Date: 09/15/16 18:45 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	<u>Result Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
1,1,1-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,1,2,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
1,1,2-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,1-Dichloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,1-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,1-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2,3-Trichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2,3-Trichloropropane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2,4-Trichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2,4-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2-Dibromo-3-chloropropane	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
1,2-Dibromoethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2-Dichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,2-Dichloroethane	0.290 J	0.500	0.150	ug/L	1		09/21/16 18:12
1,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,3,5-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,3-Dichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
1,3-Dichloropropane	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
1,4-Dichlorobenzene	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
2,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
2-Butanone (MEK)	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
2-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
2-Hexanone	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
4-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
4-Isopropyltoluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
4-Methyl-2-pentanone (MIBK)	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
Benzene	0.200 U	0.400	0.120	ug/L	1		09/21/16 18:12
Bromobenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Bromochloromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Bromodichloromethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
Bromoform	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Bromomethane	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
Carbon disulfide	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
Carbon tetrachloride	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Chlorobenzene	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
Chloroethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12

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Results of B-1003

Client Sample ID: **B-1003** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600006 Lab Project ID: 1168600

Collection Date: 09/15/16 18:45 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	<u>Limits</u>	Date Analyzed
Chloroform	0.500 U	1.00	0.300	ug/L	1		09/21/16 18:12
Chloromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
cis-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
cis-1,3-Dichloropropene	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
Dibromochloromethane	0.250 U	0.500	0.150	ug/L	1		09/21/16 18:12
Dibromomethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Dichlorodifluoromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Freon-113	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
Hexachlorobutadiene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Isopropylbenzene (Cumene)	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Methylene chloride	2.50 U	5.00	1.00	ug/L	1		09/21/16 18:12
Methyl-t-butyl ether	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
Naphthalene	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
n-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
n-Propylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/21/16 18:12
sec-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Styrene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
tert-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Tetrachloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Toluene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
trans-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
trans-1,3-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Trichloroethene	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Trichlorofluoromethane	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Vinyl acetate	5.00 U	10.0	3.10	ug/L	1		09/21/16 18:12
Vinyl chloride	0.500 U	1.00	0.310	ug/L	1		09/21/16 18:12
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		09/21/16 18:12
Surrogates							
1,2-Dichloroethane-D4 (surr)	110	81-118		%	1		09/21/16 18:12
4-Bromofluorobenzene (surr)	94.9	85-114		%	1		09/21/16 18:12
Toluene-d8 (surr)	99.5	89-112		%	1		09/21/16 18:12

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Results of B-1003

Client Sample ID: **B-1003** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600006 Lab Project ID: 1168600

Collection Date: 09/15/16 18:45 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS16214 Analytical Method: SW8260B Analyst: TJT Analytical Date/Time: 09/21/16 18:12 Container ID: 1168600006-A Prep Batch: VXX29621 Prep Method: SW5030B Prep Date/Time: 09/21/16 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Print Date: 10/10/2016 11:35:53AM

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		L					
Results of B-6-2016(36.0')							
Client Sample ID: B-6-2016(36.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600007 Lab Project ID: 1168600			Collection D Received Da Matrix: Soil/S Solids (%):9 Location:	ate: 09/16/1 ate: 09/20/1 Solid (dry we 5.4	6 11:40 6 09:57 eight)		
Results by Semivolatile Organic Fuels	,						
						Allowable	
Parameter	Result Qual	LOQ/CL	DL	Units	DF	Limits	Date Analyzed
Diesel Range Organics	26.7	20.7	6.42	mg/Kg	1		09/22/16 05:13
Surrogates	444	50 450		0/	4		00/00/40 05.40
5a Androstane (surr)	111	50-150		%	1		09/22/16 05:13
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 05:13 Container ID: 1168600007-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/10 Vt./Vol.: 30.3 : Vol: 1 mL	6 16:10 66 g		
Parameter Residual Range Organics	<u>Result Qual</u> 163	<u>LOQ/CL</u> 20.7	<u>DL</u> 6.42	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/22/16 05:13
Surrogates							
n-Triacontane-d62 (surr)	101	50-150		%	1		09/22/16 05:13
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:13 Container ID: 1168600007-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/10 Vt./Vol.: 30.3 : Vol: 1 mL	6 16:10 66 g		

Results of B-6-2016(36.0') Client Sample ID: B-6-2016(36.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600007 Lab Project ID: 1168600		C R M S La	ollection Dat eceived Date latrix: Soil/So olids (%):95. ocation:	e: 09/16/ [,] e: 09/20/1 blid (dry we 4	16 11:40 6 09:57 eight)		
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 1.19 J	<u>LOQ/CL</u> 2.88	<u>DL</u> 0.863	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 09/28/16 03:44
urrogates 4-Bromofluorobenzene (surr)	86.9	50-150		%	1		09/28/16 03:44
Analytical Batch: VFC13330 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/28/16 03:44 Container ID: 1168600007-B		F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	/XX29648 SW5035A ne: 09/16/1 ./Vol.: 49.7 /ol: 27.302	6 11:40 '37 g 8 mL		
<u>Parameter</u> Benzene	<u>Result Qual</u> 0.00720 U	<u>LOQ/CL</u> 0.0144	<u>DL</u> 0.00460	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/28/16 03:44
Ethylbenzene	0.0144 U	0.0288	0.00898	mg/Kg	1		09/28/16 03:44
o-Xylene	0.0340	0.0288	0.00898	mg/Kg	1		09/28/16 03:44
P & M -Xylene	0.0725	0.0576	0.0173	mg/Kg	1		09/28/16 03:44
Toluene	0.0144 U	0.0288	0.00898	mg/Kg	1		09/28/16 03:44
urrogates 1 4-Difluorobenzene (surr)	89 1	72-119		%	1		09/28/16 03·44
	00.1	12 110		,,,	•		00,20,10 00.11
Batch Information Analytical Batch: VFC13330 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/28/16 03:44		F	Prep Batch: M Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract M	/XX29648 SW5035A ne: 09/16/1 ./Vol.: 49.7 /ol: 27.302	6 11:40 '37 g 8 mL		

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Results of B-5-2016(27.5')							
Client Sample ID: B-5-2016(27.5') Client Project ID: Interior Texaco Lab Sample ID: 1168600008 Lab Project ID: 1168600			Collection D Received Da Matrix: Soil/S Solids (%):9 Location:	ate: 09/15/1 ate: 09/20/1 Solid (dry we 6.9	6 16:25 6 09:57 eight)		
Results by Semivolatile Organic Fuels							
						Allowable	
Parameter_	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
Diesel Range Organics	805	102	31.7	mg/Kg	5		09/23/16 23:39
Surrogates							
5a Androstane (surr)	116	50-150		%	5		09/23/16 23:39
Batch Information							
Analytical Batch: XFC12879 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/23/16 23:39 Container ID: 1168600008-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/10 Vt./Vol.: 30.2 : Vol: 1 mL	6 16:10 67 g		
<u>Parameter</u> Residual Range Organics	<u>Result Qual</u> 20.4	<u>LOQ/CL</u> 20.5	<u>DL</u> 6.34	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/22/16 05:23
Surrogates							
n-Triacontane-d62 (surr)	106	50-150		%	1		09/22/16 05:23
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:23 Container ID: 1168600008-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/10 Vt./Vol.: 30.2 : Vol: 1 mL	6 16:10 67 g		

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Results of B-5-2016(27.5')							
Client Sample ID: B-5-2016(27.5') Client Project ID: Interior Texaco Lab Sample ID: 1168600008 Lab Project ID: 1168600		C R M Si Lo	ollection Dat eceived Date atrix: Soil/So olids (%):96. ocation:	te: 09/15/ [,] e: 09/20/1 olid (dry we	16 16:25 6 09:57 eight)		
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 18.3	<u>LOQ/CL</u> 3.42	<u>DL</u> 1.03	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/27/16 19:08
Surrogates							
4-Bromofluorobenzene (surr)	214 *	50-150		%	1		09/27/16 19:08
Batch Information							
Analytical Batch: VFC13334 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 19:08 Container ID: 1168600008-B		F F F F	Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29645 SW5035A he: 09/15/1 ./Vol.: 39.5 /ol: 26.2225	6 16:25 42 g 8 mL		
Parameter Ponzono	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF 1	Allowable Limits	Date Analyzed
Ethylbenzene	0.00684 J	0.0171	0.00547	mg/Kg mg/Kg	1		09/27/16 19:08
o-Xvlene	0.271	0.0342	0.0107	ma/Ka	1		09/27/16 19:08
P & M -Xylene	0.388	0.0684	0.0205	mg/Kg	1		09/27/16 19:08
Toluene	0.0185 J	0.0342	0.0107	mg/Kg	1		09/27/16 19:08
Surrogates							
1,4-Difluorobenzene (surr)	88.7	72-119		%	1		09/27/16 19:08
Batch Information							
Analytical Batch: VFC13334 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 19:08 Container ID: 1168600008-B		F F F F	Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29645 SW5035A ne: 09/15/1 ./Vol.: 39.5 /ol: 26.222	6 16:25 42 g 8 mL		
Print Date: 10/10/2016 11:35:53AM						J flagging	g is activated

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and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec	

Results of B-7-2016(37.0°)							
Client Sample ID: B-7-2016(37.0') Client Project ID: Interior Texaco			Collection Da Received Da	ate: 09/16/ ate: 09/20/1	6 09:57		
Lab Sample ID: 1168600009			Matrix: Soil/S	Solid (dry we	eight)		
Lab Project ID: 1168600			Solids (%):9	3.5			
			Location:				
Results by Semivolatile Organic Fuels	6		_				
Parameter	Result Qual	100/01	וח	l Inits	DE	Allowable	Date Analyzed
Diesel Range Organics	10.7 U	21.3	<u>6.61</u>	mg/Kg	1	Linito	09/22/16 05:33
Surrogates				0.0			
5a Androstane (surr)	97.6	50-150		%	1		09/22/16 05:33
Batch Information							
Analytical Batch: XFC12866			Prep Batch:	XXX36358			
Analytical Method: AK102 Analyst: NRO			Prep Methoo Prep Date/Ti	1: SW3550C ime: 09/21/1	6 16:10		
Analytical Date/Time: 09/22/16 05:33			Prep Initial V	Vt./Vol.: 30.0	88 g		
Container ID: 1168600009-A			Prep Extract	Vol: 1 mL			
						Allowable	
			וח	Linita	DF	Limits	Date Analyzed
Parameter	Result Qual	LOQ/CL		Units			
Parameter Residual Range Organics	10.7 U	<u>LOQ/CL</u> 21.3	<u>6.61</u>	mg/Kg	1	<u></u>	09/22/16 05:33
Parameter Residual Range Organics Surrogates	<u>Result Qual</u> 10.7 U	<u>LOQ/CL</u> 21.3	<u>6.61</u>	mg/Kg	1		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr)	<u>Result Quai</u> 10.7 U 89.8	<u>LOQ/CL</u> 21.3 50-150	<u>6.</u> 61	mg/Kg %	1 1		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr)	<u>Result Qual</u> 10.7 U 89.8	21.3 50-150	<u>6.61</u>	mg/Kg %	1 1		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information	<u>Result Qual</u> 10.7 U 89.8	21.3 50-150	6.61	0/1115 mg/Kg %	1		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103	<u>Result Qual</u> 10.7 U 89.8	21.3 50-150	6.61 Prep Batch: Prep Method	% XXX36358 SW3550C	1		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analytical Data/Time: 00/22/16 05:22	Result Qual 10.7 U 89.8	21.3 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti	xxx36358 d: SW3550C ime: 09/21/1	1 1 6 16:10		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	21.3 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	% XXX36358 SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>LOQ/CL</u> 21.3 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	0/1115 mg/Kg % XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>21.3</u> 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	% XXX36358 : SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analytical Method: AK103 Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>LOQ/CL</u> 21.3 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	0/1115 mg/Kg % XXX36358 f: SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>21.3</u> 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	201115 mg/Kg % XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>LOQ/CL</u> 21.3 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	0/1115 mg/Kg % XXX36358 d: SW3550C ime: 09/21/1/ Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>LOQ/CL</u> 21.3 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	% XXX36358 : SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>21.3</u> 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	0/1115 mg/Kg % XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:33 Container ID: 1168600009-A	Result Qual 10.7 U 89.8	<u>21.3</u> 50-150	6.61 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	% XXX36358 : SW3550C ime: 09/21/1 Vt./Vol.: 30.0 Vol: 1 mL	1 1 6 16:10 88 g		09/22/16 05:33

Client Sample ID: B-7-2016(37.0') Client Project ID: Interior Texaco ab Sample ID: 1168600009 ab Project ID: 1168600		C R M So Lo	ollection Da eceived Dat latrix: Soil/So olids (%):93 ocation:	te: 09/16/ [,] e: 09/20/1 olid (dry we	16 15:20 6 09:57 eight)		
						Allowable	
<u>'arameter</u> Basoline Range Organics	<u>Result Qual</u> 1.81 J	<u>LOQ/CL</u> 3.27	<u>DL</u> 0.980	<u>Units</u> mg/Kg	<u>DF</u> 1	Limits	Date Analyzed
rrogates -Bromofluorobenzene (surr)	90.7	50-150		%	1		09/28/16 00:56
atch Information							
Analytical Batch: VFC13330 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/28/16 00:56 Container ID: 1168600009-B	3	F F F F	Prep Batch: \ Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract \	/XX29648 SW5035A ne: 09/16/1 t./Vol.: 45.8 /ol: 28.002	6 15:20 36 g 1 mL		
· · · · · · · · · · · · · · · · · · ·	Da sult Qual	1.00/01	D	l la ita	DE	Allowable	
arameter senzene	<u>Result Qual</u>	LOQ/CL 0.0163	<u>DL</u> 0.00523	<u>Units</u> ma/Ka	<u>DF</u> 1	Limits	Date Analyzed
thylbenzene	0.0164 U	0.0103	0.00020	ma/Ka	1		09/28/16 00:5
-Xvlene	0.0170 J	0.0327	0.0102	ma/Ka	1		09/28/16 00:5
' & M -Xvlene	0.0513 J	0.0653	0.0196	ma/Ka	1		09/28/16 00:5
oluene	0.0164 U	0.0327	0.0102	mg/Kg	1		09/28/16 00:50
rrogates							
,4-Difluorobenzene (surr)	91.2	72-119		%	1		09/28/16 00:56
atch Information							
Analytical Batch: VFC13330 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/28/16 00:56	3	F F F F	Prep Batch: \ Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract \	/XX29648 SW5035A ne: 09/16/1 t./Vol.: 45.8 /ol: 28.002	6 15:20 36 g 1 mL		

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Results of B-8-2016(37.0')							
Client Sample ID: B-8-2016(37.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600010 Lab Project ID: 1168600		C F M S L	Collection D Received Da Matrix: Soil/S Solids (%):9 Location:	ate: 09/16/ ate: 09/20/1 Solid (dry we 6.4	16 17:45 6 09:57 eight)		
Results by Semivolatile Organic Fuels							
Parameter Diesel Range Organics	<u>Result Qual</u> 557	<u>LOQ/CL</u> 20.7	<u>DL</u> 6.41	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/22/16 05:43
Surrogates							
5a Androstane (surr)	103	50-150		%	1		09/22/16 05:43
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 05:43 Container ID: 1168600010-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.0 t Vol: 1 mL	6 16:10 98 g		
						Allowable	
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	Limits	Date Analyzed
Residual Range Organics	46.0	20.7	6.41	mg/Kg	1		09/22/16 05:43
Surrogates							
n-Triacontane-d62 (surr)	108	50-150		%	1		09/22/16 05:43
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:43 Container ID: 1168600010-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.0 t Vol: 1 mL	6 16:10 98 g		

Results of B-8-2016(37.0') Client Sample ID: B-8-2016(37.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600010 Lab Project ID: 1168600		C R M Si La	ollection Dat eceived Date atrix: Soil/So blids (%):96.	e: 09/16/ e: 09/20/1 blid (dry we 4	16 17:45 6 09:57 eight)		
Results by Volatile Fuels			_			Allowable	
Parameter Gasoline Range Organics	<u>Result Qual</u> 1.52 J	<u>LOQ/CL</u> 2.57	<u>DL</u> 0.771	<u>Units</u> mg/Kg	<u>DF</u> 1	Limits	<u>Date Analyzed</u> 09/28/16 01:15
Surrogates 4-Bromofluorobenzene (surr)	87 7	50-150		%	1		09/28/16 01:15
	01.1			,0	·		00/20/10 01:10
Analytical Batch: VFC13330 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/28/16 01:15 Container ID: 1168600010-B		F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	/XX29648 SW5035A ne: 09/16/1 ./Vol.: 54.4 /ol: 26.974	6 17:45 39 g 5 mL		
Parameter Benzene	Result Qual	LOQ/CL	<u>DL</u> 0.00411	<u>Units</u>	DF 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Ethylbenzene	0.00843 U 0.0129 U	0.0129	0.00411	mg/Kg mg/Kg	1		09/28/16 01:15
o-Xylene	0.0432	0.0257	0.00802	mg/Kg	1		09/28/16 01:15
P & M -Xylene	0.0671	0.0514	0.0154	mg/Kg	1		09/28/16 01:15
Toluene	0.0129 U	0.0257	0.00802	mg/Kg	1		09/28/16 01:15
urrogates 1 4-Difluorobenzene (surr)	90.6	72-119		%	1		09/28/16 01:15
	00.0	12 110		,0	·		00/20/10 01:10
Batch Information Analytical Batch: VFC13330 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/28/16 01:15 Container ID: 1168600010-B		F F F F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	/XX29648 SW5035A ne: 09/16/1 ./Vol.: 54.4 /ol: 26.974	6 17:45 39 g 5 mL		

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Results of B-1-2016(47 0')							
Client Sample ID: B-1-2016(47.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600011 Lab Project ID: 1168600			Collection Da Received Da Matrix: Soil/S Solids (%):74 Location:	ate: 09/14/1 ate: 09/20/1 Solid (dry we 4.4	16 13:35 6 09:57 eight)		
Results by Semivolatile Organic Fuels	;						
Parameter Diosel Pango Organics	Result Qual	<u>LOQ/CL</u> 26.6	<u>DL</u> 8 26	<u>Units</u> ma/Ka	DF 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Dieser Kange Organics	13.5 0	20.0	0.20	mg/rtg	1		09/22/10 03.34
Surrogates							
5a Androstane (surr)	94.1	50-150		%	1		09/22/16 05:54
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 05:54 Container ID: 1168600011-A			Prep Batch: Prep Method Prep Date/Ti Prep Initial V Prep Extract	XXX36358 I: SW3550C me: 09/21/10 Vt./Vol.: 30.2 Vol: 1 mL	6 16:10 84 g		
Parameter Residual Range Organics	<u>Result Qual</u> 16.7.1	<u>LOQ/CL</u> 26.6	<u>DL</u> 8.26	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/22/16 05:54
Residual Range Organics	10.1 0						
Surrogates	10.1 0						
Surrogates n-Triacontane-d62 (surr)	85	50-150		%	1		09/22/16 05:54
Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 05:54 Container ID: 1168600011-A	85	50-150	Prep Batch: Prep Method Prep Date/Ti Prep Initial V Prep Extract	% XXX36358 I: SW3550C me: 09/21/10 Vt./Vol.: 30.2 Vol: 1 mL	1 6 16:10 84 g		09/22/16 05:54

J flagging is activated
Client Sample ID: B-1-2016(47.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600011 Lab Project ID: 1168600		C R M So Lo	ollection Da eceived Dat atrix: Soil/So olids (%):74 ocation:	te: 09/14/ [,] e: 09/20/1 olid (dry we .4	16 13:35 6 09:57 eight)		
Results by Volatile Fuels Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	Allowable Limits	Date Analyzed
Gasoline Range Organics	10.6	6.01	1.80	mg/Kg	1		09/26/16 23:3
Surrogates							
4-Bromofluorobenzene (surr)	92.2	50-150		%	1		09/26/16 23:3
Batch Information							
Analytical Batch: VFC13326 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/26/16 23:38 Container ID: 1168600011-B		F F F	Prep Batch: \ Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract \	/XX29639 SW5035A ne: 09/14/1 t./Vol.: 39.2 /ol: 35.056	6 13:35 41 g 5 mL		
Parameter	Result Qual		וח	Unite	DE	Allowable	Data Analyza
Benzene	0.0150 U	0.0300	0.00961	ma/Ka	1	LIIIIIS	09/26/16 23:3
Ethylbenzene	0.0301 U	0.0601	0.0187	mg/Kg	1		09/26/16 23:3
o-Xylene	0.0240 J	0.0601	0.0187	mg/Kg	1		09/26/16 23:3
P & M -Xylene	0.0727 J	0.120	0.0360	mg/Kg	1		09/26/16 23:3
Toluene	0.0709	0.0601	0.0187	mg/Kg	1		09/26/16 23:3
Surrogates							
1,4-Difluorobenzene (surr)	93.7	72-119		%	1		09/26/16 23:3
Batch Information							
Analytical Batch: VFC13326 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/26/16 23:38		F F F F	Prep Batch: N Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract N	/XX29639 SW5035A ne: 09/14/1 t./Vol.: 39.2 /ol: 35.056	6 13:35 41 g 5 mL		

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Results of B-2-2016(6.0')							
Client Sample ID: B-2-2016(6.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600012 Lab Project ID: 1168600			Collection D Received Da Matrix: Soil/ Solids (%):7 Location:	ate: 09/14/ ate: 09/20/1 Solid (dry w 9.0	16 15:25 6 09:57 eight)		
Results by Semivolatile Organic Fuels	5		_				
Parameter Diesel Range Organics	<u>Result Qual</u> 10400	<u>LOQ/CL</u> 1010	<u>DL</u> 314	<u>Units</u> mg/Kg	<u>DF</u> 40	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/23/16 23:50
Surrogates							
5a Androstane (surr)	129	50-150		%	40		09/23/16 23:50
Batch Information							
Analytical Batch: XFC12879 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/23/16 23:50 Container ID: 1168600012-A			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/1 Nt./Vol.: 30.0 t Vol: 1 mL	6 16:10 017 g		
Deservator	Desult Quel	1.00/01	DI	Linita	DE	Allowable	Data Analyzad
	Result Unat			Units		Limits	Date Analyzed
Parameter Residual Range Organics	258	25.3	7.84	mg/Kg	1		09/22/16 06:04
Parameter Residual Range Organics Surrogates	258	25.3	7.84	mg/Kg	1		09/22/16 06:04
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr)	258 93.4	25.3 50-150	7.84	mg/Kg %	1		09/22/16 06:04
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information	258 93.4	25.3 50-150	7.84	mg/Kg %	1		09/22/16 06:04
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 06:04 Container ID: 1168600012-A	93.4	25.3 50-150	7.84 Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	mg/Kg % XXX36358 d: SW3550C 'ime: 09/21/1 Nt./Vol.: 30.0 t Vol: 1 mL	1 1 6 16:10 117 g		09/22/16 06:04

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Client Sample ID: B-2-2016(6.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600012 Lab Project ID: 1168600			C R M Si La	ollection Dat eceived Dat atrix: Soil/So olids (%):79. ocation:	te: 09/14/ e: 09/20/1 blid (dry we	16 15:25 6 09:57 eight)		
Results by Volatile Fuels	Deput O	ual.	1.00/01		Linita	DE	Allowable	Data Analyzad
Gasoline Range Organics	61.4	<u>181</u>	<u>LOQ/CL</u> 4.13	<u>DL</u> 1.24	<u>oniis</u> ma/Ka	<u>DF</u> 1	Limits	09/26/16 23:56
					5 5			
4-Bromofluorobenzene (surr)	198	*	50-150		%	1		09/26/16 23:56
Batch Information								
Analytical Batch: VFC13326 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/26/16 23:56 Container ID: 1168600012-B			F F F	Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29639 SW5035A he: 09/14/1 ./Vol.: 56.5 /ol: 36.856	6 15:25 g 7 mL		
Parameter	Result Or	ıal	1.00/01	וח	Units	DE	Allowable	Date Analyzed
Benzene	0.0103 U	<u></u>	0.0206	0.00660	mg/Kg	1		09/26/16 23:56
Ethylbenzene	0.0136 J		0.0413	0.0129	mg/Kg	1		09/26/16 23:56
o-Xylene	1.63		0.0413	0.0129	mg/Kg	1		09/26/16 23:56
P & M -Xylene	0.485		0.0826	0.0248	mg/Kg	1		09/26/16 23:56
Toluene	0.0149 J		0.0413	0.0129	mg/Kg	1		09/26/16 23:56
Surrogates 1,4-Difluorobenzene (surr)	94.8		72-119		%	1		09/26/16 23:56
Patch Information								
Analytical Batch: VFC13326 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/26/16 23:56			F F F F	Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29639 SW5035A ne: 09/14/1 ./Vol.: 56.5 /ol: 36.856	6 15:25 g 7 mL		

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Results of B-2-2016(36 0')							
Client Sample ID: B-2-2016(36.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600013 Lab Project ID: 1168600			Collection Da Received Da Matrix: Soil/S Solids (%):93 Location:	ate: 09/14/ [/] ate: 09/20/1 Solid (dry we 2.5	16 16:50 6 09:57 eight)		
Results by Semivolatile Organic Fuels	5		_				
Parameter Diesel Range Organics	<u>Result Qual</u> 18.6 J	<u>LOQ/CL</u> 21.5	<u>DL</u> 6.66	<u>Units</u> mg/Kg	<u>DF</u> 1	Allowable Limits	Date Analyzed 09/22/16 06:14
Surrogates							
5a Androstane (surr)	100	50-150		%	1		09/22/16 06:14
L							
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 06:14 Container ID: 1168600013-A			Prep Batch: Prep Method Prep Date/Ti Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.1 Vol: 1 mL	6 16:10 79 g		
	De suit Quel	1.00/01	DI	11		Allowable	
			DL	Units	DF	Limits	Date Analyzed
Parameter Residual Pance Organics		21.5	6.66	ma/Ka	1		00/22/16 06:14
Parameter Residual Range Organics	14.6 J	21.5	6.66	mg/Kg	1		09/22/16 06:14
Parameter Residual Range Organics Surrogates	14.6 J	21.5	<u>6.66</u>	mg/Kg	1		09/22/16 06:14
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr)	96.5	21.5 50-150	<u></u> 6.66	mg/Kg %	1 1		09/22/16 06:14 09/22/16 06:14
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr)	96.5	21.5 50-150	<u></u> 6.66	mg/Kg %	1		09/22/16 06:14 09/22/16 06:14
Parameter Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 06:14 Container ID: 1168600013-A	96.5	21.5 50-150	6.66 Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	mg/Kg % XXX36358 I: SW3550C ime: 09/21/1 Vt./Vol.: 30.1 Vol: 1 mL	1 1 6 16:10 79 g		09/22/16 06:14

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Results of B-2-2016(36.0') Client Sample ID: B-2-2016(36.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600013)	C R M	ollection Dat eceived Dat atrix: Soil/So	te: 09/14/′ e: 09/20/1 olid (dry we	16 16:50 6 09:57 eight)		
Lab Project ID: 1168600		S	olids (%):92	.5	•		
Results by Volatile Fuels		Lo	ocation:				
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Gasoline Range Organics	5.71	5.43	1.63	mg/Kg	1		09/27/16 00:15
Surrogates							
4-Bromofluorobenzene (surr)	78.9	50-150		%	1		09/27/16 00:15
Batch Information							
Analytical Batch: VFC13326		F	Prep Batch: \	/XX29639			
Analytical Method: AK101		F	Prep Method:	SW5035A			
Analyst: ST Analytical Date/Time: 09/27/16 00:15		F	Prep Date/Tim Prep Initial W/	ne: 09/14/1	6 16:50		
Container ID: 1168600013-B		F	Prep Extract \	/ol: 27.018	5 mL		
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
Benzene	0.0136 U	0.0272	0.00869	mg/Kg	1		09/27/16 00:15
	0.0272 0	0.0543	0.0169	mg/Kg	1		09/27/16 00:15
P & M -Xvlene	0.02125	0.0545	0.0109	ma/Ka	1		09/27/16 00:15
Toluene	0.0272 U	0.0543	0.0169	mg/Kg	1		09/27/16 00:15
Surrogates							
1,4-Difluorobenzene (surr)	93.2	72-119		%	1		09/27/16 00:15
Batch Information							
Analytical Batch: VFC13326		F	Prep Batch: \	/XX29639			
Analytical Method: SW8021B Analyst: ST		ŀ	Prep Method: Prep Date/Tim	SW5035A ne: 09/14/1	6 16·50		
Analytical Date/Time: 09/27/16 00:15		F	Prep Initial Wt	t./Vol.: 26.8	9 g		
0		F	Prep Extract \	/ol: 27.018	5 mL		

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Results of B-2-2016(47 5')							
Client Sample ID: B-2-2016(47.5') Client Project ID: Interior Texaco Lab Sample ID: 1168600014 Lab Project ID: 1168600			Collection Da Received Da Matrix: Soil/S Solids (%):7 Location:	ate: 09/14/ [/] ate: 09/20/1 Solid (dry we 4.6	16 18:00 6 09:57 eight)		
Results by Semivolatile Organic Fuels			_				
<u>Parameter</u> Diesel Range Organics	<u>Result Qual</u> 56.5	<u>LOQ/CL</u> 26.6	<u>DL</u> 8.24	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/22/16 06:23
Surrogates							
5a Androstane (surr)	96.6	50-150		%	1		09/22/16 06:23
Batch Information Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 06:23 Container ID: 1168600014-A			Prep Batch: Prep Methoc Prep Date/T Prep Initial V Prep Extract	XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.2 Vol: 1 mL	6 16:10 67 g		
<u>Parameter</u> Residual Range Organics	<u>Result Qual</u> 23.7 J	<u>LOQ/CL</u> 26.6	<u>DL</u> 8.24	<u>Units</u> mg/Kg	<u>DF</u> 1	Allowable Limits	Date Analyzed 09/22/16 06:23
Surrogates							
Surrogates n-Triacontane-d62 (surr)	89.8	50-150		%	1		09/22/16 06:23
Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 06:23 Container ID: 1168600014-A	89.8	50-150	Prep Batch: Prep Methoo Prep Date/T Prep Initial V Prep Extract	% XXX36358 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.2 Vol: 1 mL	1 6 16:10 67 g		09/22/16 06:23

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Client Sample ID: B-2-2016(47.5') Client Project ID: Interior Texaco ab Sample ID: 1168600014 ab Project ID: 1168600		C R M S L	ollection Da eceived Da latrix: Soil/S olids (%):74 ocation:	te: 09/14/ te: 09/20/1 olid (dry wo	16 18:00 6 09:57 eight)		
						Allowable	
<u>'arameter</u> Basoline Range Organics	<u>Result Qual</u> 38.3	<u>LOQ/CL</u> 6.41	<u>DL</u> 1.92	<u>Units</u> mg/Kg	<u>DF</u> 1	Limits	Date Analyzed
ırrogates ⊦-Bromofluorobenzene (surr)	184 *	50-150		%	1		09/27/16 00:3
Batch Information							
Analytical Batch: VFC13326 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 00:33 Container ID: 1168600014-B			Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29639 : SW5035A ne: 09/14/1 't./Vol.: 35.6 Vol: 34.05 r	6 18:00 09 g nL		
Parameter	Result Qual	100/01	וח	Units	DF	Allowable	Date Analyzed
Benzene	0.0160 U	0.0321	0.0103	mg/Kg	1		09/27/16 00:3
thylbenzene	1.39	0.0641	0.0200	mg/Kg	1		09/27/16 00:3
-Xylene	1.83	0.0641	0.0200	mg/Kg	1		09/27/16 00:3
ν & M −Xylene	4.41	0.128	0.0385	mg/Kg	1		09/27/16 00:3
oluene	0.224	0.0641	0.0200	mg/Kg	1		09/27/16 00:3
ı rrogates ,4-Difluorobenzene (surr)	91.8	72-119		%	1		09/27/16 00:3
Batch Information							
Analytical Batch: VFC13326 Analytical Method: SW8021B Analyst: ST			Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX29639 SW5035A ne: 09/14/1 't./Vol.: 35.6	6 18:00 09 g nL		

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Results of B-2-2016(49.5')							
Client Sample ID: B-2-2016(49.5') Client Project ID: Interior Texaco Lab Sample ID: 1168600015 Lab Project ID: 1168600			Collection Da Received Da Matrix: Soil/S Solids (%):76 Location:	ate: 09/14/1 te: 09/20/1 Solid (dry we 5.4	16 18:10 6 09:57 eight)		
Results by Semivolatile Organic Fuels							
						Allowable	
Parameter	Result Qual	LOQ/CL	DL	Units	DF	Limits	Date Analyzed
Diesel Range Organics	11.9 J	26.0	8.05	mg/Kg	1		09/22/16 06:33
Surrogates							
5a Androstane (surr)	97.8	50-150		%	1		09/22/16 06:33
Patch Information							
Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 06:33 Container ID: 1168600015-A			Prep Batch: Prep Method Prep Date/Tii Prep Initial W Prep Extract	XXX36358 : SW3550C me: 09/21/1/ /t./Vol.: 30.2 Vol: 1 mL	6 16:10 34 g		
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Allowable Limits	Date Analyzed
Residual Range Organics	18.3 J	26.0	8.05	mg/Kg	I		00,22,10,0000
Residual Range Organics Surrogates	18.3 J	26.0	8.05	mg/Kg	I		
Residual Range Organics Surrogates n-Triacontane-d62 (surr)	18.3 J 101	26.0 50-150	8.05	mg/Kg %	1		09/22/16 06:33
Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information	18.3 J 101	26.0 50-150	8.05	mg/Kg %	1		09/22/16 06:33
Residual Range Organics Surrogates n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 06:33 Container ID: 1168600015-A	18.3 J 101	26.0	8.05 Prep Batch: Prep Method Prep Date/Tii Prep Initial W Prep Extract	mg/Kg % XXX36358 : SW3550C me: 09/21/10 /t./Vol.: 30.2 Vol: 1 mL	1 6 16:10 34 g		09/22/16 06:33

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Client Sample ID: B-2-2016(49.5') Client Project ID: Interior Texaco Lab Sample ID: 1168600015 Lab Project ID: 1168600		C R M S L	collection Dat Received Dat Iatrix: Soil/So Iolids (%):76. ocation:	te: 09/14/ e: 09/20/1 olid (dry wo	16 18:10 6 09:57 eight)		
Results by Volatile Fuels							
Parameter	Result Qual	<u>LOQ/CL</u>	<u>DL</u> 1.24	<u>Units</u> ma/Ka	DF 1	Allowable Limits	Date Analyzed
	0.07 0	4.10	1.24	mg/rtg	I		00/21/10 00.0
Surrogates 4-Bromofluorobenzene (surr)	78.4	50-150		%	1		09/27/16 00:52
Batch Information							
Analytical Batch: VFC13326 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 00:52 Container ID: 1168600015-B			Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29639 SW5035A ne: 09/14/1 :./Vol.: 63.0 /ol: 39.876	6 18:10 95 g 4 mL		
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	Allowable Limits	Date Analyzed
Benzene	0.0104 U	0.0207	0.00662	mg/Kg	1		09/27/16 00:5
Ethylbenzene	0.0732	0.0413	0.0129	mg/Kg	1		09/27/16 00:5
o-Xylene	0.138	0.0413	0.0129	mg/Kg	1		09/27/16 00:5
P & M -Xylene	0.151	0.0827	0.0248	mg/Kg	1		09/27/16 00:5
Toluene	0.0207 0	0.0413	0.0129	mg/kg	I		09/27/10 00.5
Surrogates	00.8	72 110		0/	1		00/27/16 00:5
	90.0	72-119		70	I		09/27/10 00.52
Batch Information							
Analytical Batch: VFC13326 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 00:52			Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29639 SW5035A ne: 09/14/1 /Vol.: 63.0 /ol: 39.876	6 18:10 95 g 4 mL		

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Results of B-3-2016(33.0')							
Client Sample ID: B-3-2016(33.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600016 Lab Project ID: 1168600		C F N S L	Collection Da Received Da Matrix: Soil/S Solids (%):93	ate: 09/15/ [^] ate: 09/20/1 Solid (dry we 3.0	16 12:40 6 09:57 eight)		
Results by Semivolatile Organic Fuel	5		_				
<u>Parameter</u> Diesel Range Organics	<u>Result Qual</u> 28.6	<u>LOQ/CL</u> 21.2	<u>DL</u> 6.59	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/22/16 06:43
Surrogates							
5a Androstane (surr)	95.8	50-150		%	1		09/22/16 06:43
Batch Information							
Analytical Batch: XFC12866 Analytical Method: AK102 Analyst: NRO Analytical Date/Time: 09/22/16 06:43 Container ID: 1168600016-A			Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	XXX36358 I: SW3550C ime: 09/21/1 Vt./Vol.: 30.3 Vol: 1 mL	6 16:10 66 g		
Parameter	<u>Result Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> Limits	Date Analyzed
Residual Range Organics	23.1	21.2	6.59	mg/Kg	1		09/22/16 06:43
Surrogatos							
Surroyales							
n-Triacontane-d62 (surr)	92.4	50-150		%	1		09/22/16 06:43
n-Triacontane-d62 (surr)	92.4	50-150		%	1		09/22/16 06:43
n-Triacontane-d62 (surr) Batch Information Analytical Batch: XFC12866 Analytical Method: AK103 Analyst: NRO Analytical Date/Time: 09/22/16 06:43 Container ID: 1168600016-A	92.4	50-150	Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	% XXX36358 I: SW3550C me: 09/21/1 Vt./Vol.: 30.3 Vol: 1 mL	1 6 16:10 66 g		09/22/16 06:43

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Results by Volatile Fuels Parameter Result Qual LOQ/CL DL Units DF Parameter Gasoline Range Organics 3.19 J 3.68 1.10 mg/Kg 1 Surrogates 4-Bromofluorobenzene (surr) 109 50-150 % 1 1 Batch Information Analytical Batch: VFC13334 Analytical Method: AK101 Analytical Method: AK101 Analytical Date/Time: 09/27/16 19:27 Container ID: 1168600016-B Prep Batch: VXX29645 Prep Date/Time: 09/15/16 12:40 Prep Initial Wt./vol: 40.736 g Prep Extract Vol: 27.856 mL Prep Method: SW5035A Prep Date/Time: 09/15/16 12:40 Prep Initial Wt./vol: 40.736 g Prep Extract Vol: 27.856 mL Parameter Result Qual LOQ/CL 0.00735 J DL 0.0184 Units DF Benzene 0.00735 J 0.0184 0.00588 mg/Kg 1 Container 0.159 0.0368 0.0115 mg/Kg 1 O-Xylene 0.159 0.0368 0.0115 mg/Kg 1 P& M -Xylene 0.0246 J 0.0368 0.0115 mg/Kg 1 Surrogates 1 90.5 72-119 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/27/16 19:27 09/27/16 19:27
Parameter Gasoline Range Organics Result Qual 3.19 J LOQ/CL 3.68 DL Units Units DE 1 DE 1 Surrogates 4-Bromofluorobenzene (surr) 109 50-150 % 1 Batch Information Analytical Batch: VFC13334 Analytical Method: AK101 Analytical Date/Time: 09/27/16 19:27 Container ID: 1168600016-B Prep Batch: VXX29645 Prep Date/Time: 09/15/16 12:40 Prep Initial WL/Vol.: 40.736 g Prep Extract Vol: 27.856 mL Parameter Benzene Result Qual 0.00735 J LOQ/CL 0.0184 DL 0.00588 Units mg/Kg DF 1 Parameter Benzene Result Qual 0.00735 J LOQ/CL 0.0184 DL 0.00588 Units mg/Kg DF 1 Parameter Benzene 0.0184 U 0.0368 0.0115 mg/Kg 1 Parameter Benzene 0.0266 J 0.0368 0.0115 mg/Kg 1 Surrogates 1,4-Difluorobenzene (surr) 90.5 72-119 % 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Surrogates 4-Bromofluorobenzene (surr) 109 50-150 % 1 Batch Information Analytical Batch: VFC13334 Prep Batch: VXX29645 Analytical Method: AK101 Prep Method: SW5035A Analytical Date/Time: 09/27/16 19:27 Prep Date/Time: 09/15/16 12:40 Container ID: 1168600016-B Prep Initial WL/Vol.: 40.736 g Prep Extract Vol: 27.856 mL Prep Extract Vol: 27.856 mL Parameter Result Qual LOQ/CL DL Units DE Benzene 0.00735 J 0.0184 0.00588 mg/Kg 1 C-Xylene 0.159 0.0368 0.0115 mg/Kg 1 P & M -Xylene 0.253 0.0735 0.0221 mg/Kg 1 Surrogates 1,4-Difluorobenzene (surr) 90.5 72-119 % 1		09/27/16 19:27
Batch Information Analytical Batch: VFC13334 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 19:27 Container ID: 1168600016-B Prep Batch: VXX29645 Prep Method: SW5035A Prep Date/Time: 09/15/16 12:40 Prep Initial Wt./vol.: 40.736 g Prep Extract Vol: 27.856 mL Parameter Result Qual 0.00735 J LOQ/CL 0.0184 DL 0.00588 Units mg/Kg DE 1 Parameter Result Qual 0.00735 J LOQ/CL 0.0184 DL 0.00588 Units mg/Kg DE 1 Prep Parameter 0.0184 U 0.0368 0.0115 mg/Kg 1 PARAME 0.159 0.0368 0.0115 mg/Kg 1 o-Xylene 0.0246 J 0.0368 0.0115 mg/Kg 1 Surrogates 1 90.5 72-119 % 1		
Parameter Result Qual LOQ/CL DL Units DF Benzene 0.00735 J 0.0184 0.00588 mg/Kg 1 Ethylbenzene 0.0184 U 0.0368 0.0115 mg/Kg 1 o-Xylene 0.159 0.0368 0.0115 mg/Kg 1 P & M -Xylene 0.253 0.0735 0.0221 mg/Kg 1 Toluene 0.0246 J 0.0368 0.0115 mg/Kg 1 Surrogates 1,4-Difluorobenzene (surr) 90.5 72-119 % 1		
Surrogates 1,4-Difluorobenzene (surr) 90.5 72-119 % 1 Batch Information	Allowable Limits	Date Analyzed 09/27/16 19:27 09/27/16 19:27 09/27/16 19:27 09/27/16 19:27 09/27/16 19:27
Batch Information		09/27/16 19:27
Analytical Batch: VFC13334Prep Batch: VXX29645Analytical Method: SW8021BPrep Method: SW5035AAnalyst: STPrep Date/Time: 09/15/16 12:40Analytical Date/Time: 09/27/16 19:27Prep Initial Wt./Vol.: 40.736 gContainer ID: 1168600016-BPrep Extract Vol: 27.856 mL		

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Results of B-4-2016(11.0')

Client Sample ID: **B-4-2016(11.0')** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600017 Lab Project ID: 1168600 Collection Date: 09/15/16 13:20 Received Date: 09/20/16 09:57 Matrix: Soil/Solid (dry weight) Solids (%):79.7 Location:

Results by Polynuclear Aromatics GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
1-Methylnaphthalene	39.2	3.11	0.932	mg/Kg	500		10/08/16 17:27
2-Methylnaphthalene	47.8	3.11	0.932	mg/Kg	500		10/08/16 17:27
Acenaphthene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Acenaphthylene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Anthracene	0.578	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Benzo(a)Anthracene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Benzo[a]pyrene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Benzo[b]Fluoranthene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Benzo[g,h,i]perylene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Benzo[k]fluoranthene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Chrysene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Dibenzo[a,h]anthracene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Fluoranthene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Fluorene	2.40	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Indeno[1,2,3-c,d] pyrene	0.156 U	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Naphthalene	40.4	3.11	0.932	mg/Kg	500		10/08/16 17:27
Phenanthrene	2.23	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Pyrene	0.109 J	0.311	0.0932	mg/Kg	50		10/06/16 01:41
Surrogates							
2-Fluorobiphenyl (surr)	216 *	46-115		%	50		10/06/16 01:41
Terphenyl-d14 (surr)	98.7	58-133		%	50		10/06/16 01:41

Batch Information

Analytical Batch: XMS9669 Analytical Method: 8270D SIM (PAH) Analyst: S.G Analytical Date/Time: 10/06/16 01:41 Container ID: 1168600017-A

Analytical Batch: XMS9677 Analytical Method: 8270D SIM (PAH) Analyst: S.G Analytical Date/Time: 10/08/16 17:27 Container ID: 1168600017-A Prep Batch: XXX36371 Prep Method: SW3550C Prep Date/Time: 09/22/16 21:05 Prep Initial Wt./Vol.: 22.717 g Prep Extract Vol: 1 mL

Prep Batch: XXX36371 Prep Method: SW3550C Prep Date/Time: 09/22/16 21:05 Prep Initial Wt./Vol.: 22.717 g Prep Extract Vol: 1 mL

Print Date: 10/10/2016 11:35:53AM

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Client Sample ID: B-4-2016(11.0')			Collection D	ate: 09/15/	16 13:20		
Client Project ID: Interior Texaco			Received Da	ate: 09/20/1	6 09:57		
Lab Sample ID: 1168600017			Matrix: Soil/ Solido (%):7	Solid (dry we	eight)		
			Location:	9.7			
Results by Semivolatile Organic Fue	ls						
	-		_			Allowable	
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Limits	Date Analyzed
Diesel Range Organics	9550	997	309	mg/Kg	40		09/26/16 03:09
Surrogates							
5a Androstane (surr)	271 *	50-150		%	40		09/26/16 03:09
Batch Information							
Analytical Batch: XEC12885			Pren Batch:	XXX36360			
Analytical Method: AK102			Prep Metho	d: SW3550C			
Analyst: NRO			Prep Date/T	ime: 09/21/1	6 20:15		
Container ID: 1168600017-A			Prep Extrac	t Vol: 1 mL	. 10 g		
Parameter	Result Qual		וח	Units	DE	Allowable	Date Analyzed
Residual Range Organics	175	99.7	<u>30.9</u>	mg/Kg	4		09/22/16 14:35
Surrogates							
n-Triacontane-d62 (surr)	120	50-150		%	4		09/22/16 14:35
[
Batch Information							
Analytical Batch: XFC12874 Analytical Method: AK103			Prep Batch: Prep Metho	XXX36360 d [.] SW3550C			
Analyst: CRA			Prep Date/T	ime: 09/21/1	6 20:15		
Analytical Date/Time: 09/22/16 14:35 Container ID: 1168600017-A			Prep Initial V Prep Extrac	Wt./Vol.: 30.2 t Vol: 1 mL	16 g		

Results of B-4-2016(11.0')							
Client Sample ID: B-4-2016(11.0') Client Project ID: Interior Texaco Lab Sample ID: 1168600017 Lab Project ID: 1168600	Collection Date: 09/15/16 13:20 Received Date: 09/20/16 09:57 Matrix: Soil/Solid (dry weight) Solids (%):79.7 Location:						
Results by Volatile Fuels							
<u>Parameter</u> Gasoline Range Organics	<u>Result Qual</u> 3400	<u>LOQ/CL</u> 89.0	<u>DL</u> 26.7	<u>Units</u> mg/Kg	<u>DF</u> 20	<u>Allowable</u> Limits	<u>Date Analyze</u> 09/27/16 17:5
urrogates 4-Bromofluorobenzene (surr)	997 *	50-150		%	20		09/27/16 17:5
Batch Information							
Analytical Batch: VFC13334 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 17:52 Container ID: 1168600017-C			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	VXX29645 I: SW5035A me: 09/15/1 Vt./Vol.: 49.4 Vol: 35.043	6 13:20 07 g 4 mL		
<u>Parameter</u> Benzene	<u>Result Qual</u> 0.418 J	<u>LOQ/CL</u> 0.445	<u>DL</u> 0.142	<u>Units</u> mg/Kg	<u>DF</u> 20	<u>Allowable</u> Limits	Date Analyze 09/27/16 17:5
Ethylbenzene	1.01	0.890	0.278	mg/Kg	20		09/27/16 17:5
o-Xylene	726	22.3	6.94	mg/Kg	500		09/28/16 19:1
P & M -Xylene Toluene	1080 3.62	44.5 0.890	13.4 0.278	mg/Kg mg/Kg	500 20		09/28/16 19:1 09/27/16 17:5
urrogates							
1,4-Difluorobenzene (surr)	94.6	72-119		%	20		09/27/16 17:5
Batch Information							
Analytical Batch: VFC13334 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 17:52 Container ID: 1168600017-C			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	VXX29645 I: SW5035A me: 09/15/1 Vt./Vol.: 49.4 Vol: 35.043	6 13:20 .07 g 4 mL		
Analytical Batch: VFC13335 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/28/16 19:15 Container ID: 1168600017-C			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	VXX29657 I: SW5035A me: 09/15/1 Vt./Vol.: 49.4 Vol: 35.043	6 13:20 07 g 4 mL		

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Re	esults of B-4-2016(35.0')							
CI CI La La	ient Sample ID: B-4-2016(35.0') ient Project ID: Interior Texaco lb Sample ID: 1168600018 lb Project ID: 1168600			Collection Da Received Da Matrix: Soil/S Solids (%):98 Location:	ate: 09/15/ ate: 09/20/1 Solid (dry we 5.8	16 14:40 6 09:57 eight)		
Re	esults by Semivolatile Organic Fuels	;						
<u>Pa</u> Die	i <u>rameter</u> esel Range Organics	<u>Result Qual</u> 487	<u>LOQ/CL</u> 20.6	<u>DL</u> 6.39	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/22/16 14:45
Sur	rogates							
5a	Androstane (surr)	108	50-150		%	1		09/22/16 14:45
B	atch Information							
	Analytical Batch: XFC12874 Analytical Method: AK102 Analyst: CRA Analytical Date/Time: 09/22/16 14:45 Container ID: 1168600018-A			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX36360 I: SW3550C me: 09/21/1 /t./Vol.: 30.4 Vol: 1 mL	6 20:15 1 g		
				וח	Unita		Allowable	Data Apolyzad
Do	romotor	Deput Ouel	1 / 1/ 1// 1			1/6	LIMILS	Date Analyzed
Pa Re	<u>irameter</u> esidual Range Organics	<u>Result Qual</u> 63.7	<u>LOQ/CL</u> 20.6	<u>DL</u> 6.39	ma/Ka	1		09/22/16 14:45
<u>Pa</u> Re	irameter sidual Range Organics	<u>Result Qual</u> 63.7	<u>LOQ/CL</u> 20.6	<u>DL</u> 6.39	mg/Kg	1		09/22/16 14:45
Pa Re Sur n-	<u>irameter</u> esidual Range Organics rogates Triacontane-d62 (surr)	<u>Result Qual</u> 63.7 117	<u>LOQ/CL</u> 20.6 50-150	<u>DL</u> 6.39	mg/Kg %	1 1		09/22/16 14:45
Pa Re Sur n-	irameter esidual Range Organics rogates Triacontane-d62 (surr) atch Information	<u>Result Qual</u> 63.7 117	<u>LOQ/CL</u> 20.6 50-150	<u>6.39</u>	mg/Kg %	1		09/22/16 14:45 09/22/16 14:45
Pa Re Sur n-	trameter esidual Range Organics rogates Triacontane-d62 (surr) Atch Information Analytical Batch: XFC12874 Analytical Method: AK103 Analyst: CRA Analytical Date/Time: 09/22/16 14:45 Container ID: 1168600018-A	<u>Result Qual</u> 63.7 117	<u>LOQ/CL</u> 20.6 50-150	6.39 Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	mg/Kg % XXX36360 I: SW3550C me: 09/21/1 Vt./Vol.: 30.4 Vol: 1 mL	1 1 6 20:15 1 g		09/22/16 14:45

esults by Volatile Fuels <u>arameter</u> asoline Range Organics rrogates •Bromofluorobenzene (surr)	Result Qual						
<u>arameter</u> asoline Range Organics rrogates ·Bromofluorobenzene (surr)	Result Qual						
rrogates ·Bromofluorobenzene (surr)	2.77 J	<u>LOQ/CL</u> 3.35	<u>DL</u> 1.01	<u>Units</u> mg/Kg	<u>DF</u> 1	Allowable Limits	<u>Date Analyzec</u> 09/27/16 19:46
Bromofluorobenzene (surr)							
	98.7	50-150		%	1		09/27/16 19:46
atch Information							
Analytical Batch: VFC13334 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 19:46 Container ID: 1168600018-B		F F F	Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29645 SW5035A ie: 09/15/10 ./Vol.: 41.6 /ol: 26.759	6 14:40 91 g 7 mL		
arameter enzene	<u>Result Qual</u> 0.00840 U	<u>LOQ/CL</u> 0.0168	<u>DL</u> 0.00536	<u>Units</u> ma/Ka	<u>DF</u> 1	Allowable Limits	<u>Date Analyzec</u> 09/27/16 19:46
thylbenzene	0.0168 U	0.0335	0.0105	mg/Kg	1		09/27/16 19:46
Xylene	0.154	0.0335	0.0105	mg/Kg	1		09/27/16 19:4
& M -Xylene	0.251	0.0670	0.0201	mg/Kg	1		09/27/16 19:4
oluene	0.0137 J	0.0335	0.0105	mg/Kg	1		09/27/16 19:4
rrogates							
4-Difluorobenzene (surr)	88.9	72-119		%	1		09/27/16 19:4
atch Information							
Analytical Batch: VFC13334 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 19:46 Container ID: 1168600018-B		F F F F	Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	'XX29645 SW5035A ie: 09/15/10 ./Vol.: 41.6 /ol: 26.759	6 14:40 91 g 7 mL		

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Results of B-1001

Client Sample ID: **B-1001** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600019 Lab Project ID: 1168600

Collection Date: 09/15/16 13:50 Received Date: 09/20/16 09:57 Matrix: Soil/Solid (dry weight) Solids (%):79.7 Location:

Results by Polynuclear Aromatics GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
1-Methylnaphthalene	35.7	3.10	0.931	mg/Kg	500		10/08/16 17:49
2-Methylnaphthalene	42.9	3.10	0.931	mg/Kg	500		10/08/16 17:49
Acenaphthene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Acenaphthylene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Anthracene	0.506	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Benzo(a)Anthracene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Benzo[a]pyrene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Benzo[b]Fluoranthene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Benzo[g,h,i]perylene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Benzo[k]fluoranthene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Chrysene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Dibenzo[a,h]anthracene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Fluoranthene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Fluorene	2.17	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Indeno[1,2,3-c,d] pyrene	0.155 U	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Naphthalene	36.7	3.10	0.931	mg/Kg	500		10/08/16 17:49
Phenanthrene	2.08	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Pyrene	0.112 J	0.310	0.0931	mg/Kg	50		10/06/16 02:02
Surrogates							
2-Fluorobiphenyl (surr)	209 *	46-115		%	50		10/06/16 02:02
Terphenyl-d14 (surr)	89.2	58-133		%	50		10/06/16 02:02

Batch Information

Analytical Batch: XMS9669 Analytical Method: 8270D SIM (PAH) Analyst: S.G Analytical Date/Time: 10/06/16 02:02 Container ID: 1168600019-A

Analytical Batch: XMS9677 Analytical Method: 8270D SIM (PAH) Analyst: S.G Analytical Date/Time: 10/08/16 17:49 Container ID: 1168600019-A Prep Batch: XXX36371 Prep Method: SW3550C Prep Date/Time: 09/22/16 21:05 Prep Initial Wt./Vol.: 22.742 g Prep Extract Vol: 1 mL

Prep Batch: XXX36371 Prep Method: SW3550C Prep Date/Time: 09/22/16 21:05 Prep Initial Wt./Vol.: 22.742 g Prep Extract Vol: 1 mL

Print Date: 10/10/2016 11:35:53AM

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	Collection Date: 09/15/16 16:50 Received Date: 09/20/16 09:57 Matrix: Soil/Solid (dry weight) Solids (%):97.2 Location:					
5						
<u>Result Qual</u> 600	<u>LOQ/CL</u> 20.3	<u>DL</u> 6.30	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 09/22/16 14:55
108	50-150		%	1		09/22/16 14:55
		Prep Batch: Prep Methoo Prep Date/T Prep Initial V Prep Extract	XXX36360 d: SW3550C ime: 09/21/1 Vt./Vol.: 30.3 t Vol: 1 mL	6 20:15 35 g		
<u>Result Qual</u> 22.5	<u>LOQ/CL</u> 20.3	<u>DL</u> 6.30	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/22/16 14:55
104	50-150		%	1		09/22/16 14:55
		Prep Batch: Prep Methoo Prep Date/T Prep Initial V Prep Extract	XXX36360 d: SW3550C iime: 09/21/1 Vt./Vol.: 30.3 t Vol: 1 mL	6 20:15 35 g		
	Result Qual 600 108 Result Qual 22.5 104	Result Qual 600 LOQ/CL 20.3 108 50-150 Result Qual 22.5 LOQ/CL 20.3 104 50-150	Result Qual 600 LOQ/CL 20.3 DL 6.30 108 50-150 Prep Batch: Prep Method Prep Date/T Prep Initial N Prep Extract Result Qual 22.5 LOQ/CL 20.3 DL 6.30 104 50-150 Prep Batch: Prep Method Prep Date/T Prep Initial N Prep Extract Prep Batch: Prep Method Prep Date/T Prep Initial N Prep Extract	Collection Date: 09/15// Received Date: 09/20/1 Matrix: Soil/Solid (dry we Solids (%):97.2 Location: Result Qual 600 LOQ/CL 20.3 DL 6.30 Units mg/Kg 108 50-150 % Prep Batch: XXX36360 Prep Method: SW3550C Prep Date/Time: Result Qual 22.5 LOQ/CL 20.3 DL Prep Date/Time: Units 09/21/1 Prep Initial Wt./Vol.: Result Qual 22.5 LOQ/CL 20.3 DL 6.30 Units mg/Kg 104 50-150 % Prep Batch: XXX36360 Prep Date/Time: 09/21/1 Prep Initial Wt./Vol.: Prep Batch: XXX36360 Prep Date/Time: 09/21/1 Prep Initial Wt./Vol.: Prep Batch: XXX36360 Prep Date/Time: 09/21/1 Prep Initial Wt./Vol.: Prep Extract Vol: 1 mL	Collection Date: 09/15/16 16:50 Received Date: 09/20/16 09:57 Matrix: Solids (%):97.2 Location: Result Qual LOQ/CL DL Units DE 600 20.3 6.30 mg/Kg 1 108 50-150 % 1 Prep Batch: XXX36360 Prep Method: 30.35 g Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Extract Vol: 1 mL 1 Result Qual LOQ/CL DL Units DE 104 50-150 % 1 Prep Batch:: XXX36360 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 104 50-150 % 1 1 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 Prep Date/Time: 09/21/16 20:15 <td>Collection Date: 09/15/16 16:50 Matrix: Soli/Solid (dry) weight): Solids (%):97.2 Location: Result Qual LOQ/CL DL Units DE 108 50-150 % 1 Prep Batch: XXX36360 Prep Method:: SW3550C Prep Date: 20.3 DL Units DE 108 50-150 % 1 Result Qual LOQ/CL DL Units DE Prep Date: XXX36360 Prep Date: Milowable 108 50-150 % 1 Result Qual LOQ/CL DL Units DE 104 50-150 % 1 Prep Batch: XXX36380 Prep Method: SW3550C Prep Date/Time: 99/21/16 20:15 Prep Date/Time: 99/21/16 20:15 104 50-150 % 1 SW3590C Prep Extract Voi: 1 mL Prep Extract Voi: 1 mL SW3590C Prep Extract Voi: 1 mL SW3590C Prep Prep Prep Prep Prep Prep Prep Prep</td>	Collection Date: 09/15/16 16:50 Matrix: Soli/Solid (dry) weight): Solids (%):97.2 Location: Result Qual LOQ/CL DL Units DE 108 50-150 % 1 Prep Batch: XXX36360 Prep Method:: SW3550C Prep Date: 20.3 DL Units DE 108 50-150 % 1 Result Qual LOQ/CL DL Units DE Prep Date: XXX36360 Prep Date: Milowable 108 50-150 % 1 Result Qual LOQ/CL DL Units DE 104 50-150 % 1 Prep Batch: XXX36380 Prep Method: SW3550C Prep Date/Time: 99/21/16 20:15 Prep Date/Time: 99/21/16 20:15 104 50-150 % 1 SW3590C Prep Extract Voi: 1 mL Prep Extract Voi: 1 mL SW3590C Prep Extract Voi: 1 mL SW3590C Prep Prep Prep Prep Prep Prep Prep Prep

	Collection Date: 09/15/16 16:50 Received Date: 09/20/16 09:57 Matrix: Soil/Solid (dry weight) Solids (%):97.2 Location:					
		_				
<u>Result Qual</u> 17.4	<u>LOQ/CL</u> 3.32	<u>DL</u> 0.997	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyzec</u> 09/27/16 20:0
214 *	50-150		%	1		09/27/16 20:0
		Prep Batch: \ Prep Method: Prep Date/Tin Prep Initial Wt Prep Extract \	/XX29645 SW5035A ne: 09/15/1 :./Vol.: 40.4 /ol: 26.128	6 16:50 26 g 8 mL		
<u>Result Qual</u> 0.00830 U	<u>LOQ/CL</u> 0.0166	<u>DL</u> 0.00532	<u>Units</u> mg/Kg	<u>DF</u> 1	Allowable Limits	Date Analyzed
0.0419 0.159	0.0332 0.0332	0.0104 0.0104	mg/Kg mg/Kg	1 1		09/27/16 20:0 09/27/16 20:0
0.0678 0.0166 U	0.0665 0.0332	0.0199 0.0104	mg/Kg mg/Kg	1 1		09/27/16 20:0 09/27/16 20:0
88.8	72-119		%	1		09/27/16 20:0
		Prep Batch: Prep Method: Prep Date/Tin Prep Initial Wt Prep Extract \	/XX29645 SW5035A ne: 09/15/1 t./Vol.: 40.4 /ol: 26.128	6 16:50 26 g 8 mL		
	Result Qual 17.4 214 * 0.00830 U 0.0419 0.159 0.0678 0.0166 U 88.8	Result Qual 17.4 LOQ/CL 3.32 214 * 50-150 Result Qual 0.00830 U LOQ/CL 0.0166 0.0166 0.0419 0.0332 0.0678 0.0665 0.0166 U 0.0332 88.8 72-119	Result QualLOQ/CLDL17.43.320.997214*50-150214*50-150Prep Batch: \ Prep Method: Prep Date/Tin Prep Extract \0.00830 U0.01660.005320.04190.03320.01040.1590.03320.01040.06650.01990.01660.0166 U0.03320.010488.872-119Prep Batch: \ Prep Method: Prep Date/Tin Prep Extract \	Result Qual LOQ/CL DL Units 17.4 3.32 0.997 mg/Kg 214 * 50-150 % Prep Batch: VXX29645 Prep Method: SW5035A Prep Date/Time: 09/15/1 Prep Initial Wt./Vol.: 40.4 Prep Extract Vol: 26.128 Result Qual LOQ/CL DL Units 0.00830 U 0.0166 0.00532 mg/Kg 0.0419 0.0332 0.0104 mg/Kg 0.0665 0.0199 mg/Kg 0.0666 0.0104 mg/Kg 0.0166 U 0.0332 0.0104 mg/Kg 88.8 72-119 % Prep Batch: VXX29645 Prep Method: SW5035A Prep Date/Time: 09/15/1 Prep Initial Wt./vol.: 40.4 Prep Extract Vol: 26.128	Collection Date: 09/15/16 16:50 Received Date: 09/20/16 09:27 Matrix: Soiil/Soiid (dry weight) Soiids (%):97.2 Location: Location: DL Units DE 17.4 3.32 0.997 mg/Kg 1 214 50-150 % 1 Prep Batch: VXX29645 Prep Method: SV/5035A Prep Date/Time: 09/15/16 16:50 Prep Date/Time: 09/15/16 16:50 Prep Date/Time: 09/15/16 16:50 Prep Date/Time: 09/15/16 16:50 0.00830 U 0.0166 0.00532 mg/Kg 0.0419 0.0332 0.0104 mg/Kg 1 0.0578 0.0665 0.0199 mg/Kg 1 0.0664 0.0332 0.0104 mg/Kg 1 88.8 72-119 % 1 1 Prep Batch: VXX29645 Prep Method: SVX5035A Prep Method: SVX5035A Prep Date/Time: 09/15/16 16:50	Collection Date: 09/15/16 16:50 Received Date: 09/20/16 09:57 Matrix: Soi/Solid (dry weight) Solids (%):97.22 Location:Result Qual 17.4LOQ/CL 3.32DL 0.997Units mg/KgDE L Limits21450-150%1Prep Batch: VXX29645 Prep Method: SW9035A Prep Date/Time: 09/15/16 16:50 Prep Initial WL/Vol: 40.426 g Prep Extract Vol: 26.1288 mLResult Qual 0.00830 U 0.0166LOQ/CL 0.00532DL winkgMIowable LimitsResult Qual 0.00830 U 0.0166LOQ/CL 0.00322DL winkgMIowable LimitsResult Qual 0.00830 U 0.0166LOQ/CL 0.00322DL winkgMIowable LimitsResult Qual 0.00830 U 0.0166LOQ/CL 0.00322DL winkgMIowable LimitsResult Qual 0.00830 U 0.0166 UDL 0.00322Units mg/KgDE LimitsNotifie U 0.03320.0104 0.0104mg/Kg188.872-119%1Basa Prep Date/Time: 09/15/16 16:50 Prep Method: SW5035A Prep Date/Time: 09/15/16 16:50 Prep Initial WL/Vol: 40.426 g Prep Extract Vol: 26.1288 mL

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Results of Trip Blank							
Client Sample ID: Trip Blank Client Project ID: Interior Texaco Lab Sample ID: 1168600021 Lab Project ID: 1168600	Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:						
Results by Volatile Fuels							
Parameter	Result Qual	100/01	וס	Units	DF	Allowable	Date Analyzed
Gasoline Range Organics	0.0500 U	0.100	0.0310	mg/L	1	Linito	09/27/16 13:10
				Ū			
4-Bromofluorobenzene (surr)	83.7	50-150		%	1		09/27/16 13.10
	00.7	00-100		70	I		00/21/10 10.10
Batch Information							
Analytical Batch: VFC13331 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/27/16 13:10 Container ID: 1168600021-A			Prep Batch: \ Prep Method: Prep Date/Tir Prep Initial W Prep Extract \	VXX29647 SW5030E ne: 09/27/ t./Vol.: 5 m Vol: 5 mL	3 16 06:00 1L		
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	Limits	Date Analyzed
Benzene	0.250 U	0.500	0.150	ug/L	1		09/27/16 13:10
	0.500 U	1.00	0.310	ug/L	1		09/27/16 13:10
	1 00 11	2.00	0.310	ug/L	1		09/27/16 13:10
	0.500 U	2.00	0.020	ug/L	1		09/27/16 13:10
	0.000 0	1.00	0.010	ugit	·		00/21/10 10:10
Surrogates 1.4-Difluorobenzene (surr)	92.3	77-115		%	1		09/27/16 13:10
Batch Information Analytical Batch: VFC13331 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/27/16 13:10 Container ID: 1168600021-A			Prep Batch: ^ Prep Method: Prep Date/Tir Prep Initial W Prep Extract ^	VXX29647 SW5030E ne: 09/27/ t./Vol.: 5 m Vol: 5 mL	3 16 06:00 1L		
Container ID: 1168600021-A			Prep Extract	voi: 5 mL			

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Results of Trip Blank

Client Sample ID: **Trip Blank** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600021 Lab Project ID: 1168600 Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
1,1,1-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,1,2,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
1,1,2-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,1-Dichloroethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,1-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,1-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2,3-Trichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2,3-Trichloropropane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2,4-Trichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2,4-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2-Dibromo-3-chloropropane	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
1,2-Dibromoethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2-Dichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,2-Dichloroethane	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
1,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,3,5-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,3-Dichlorobenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
1,3-Dichloropropane	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
1,4-Dichlorobenzene	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
2,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
2-Butanone (MEK)	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
2-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
2-Hexanone	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
4-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
4-Isopropyltoluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
4-Methyl-2-pentanone (MIBK)	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
Benzene	0.200 U	0.400	0.120	ug/L	1		09/27/16 01:27
Bromobenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Bromochloromethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Bromodichloromethane	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
Bromoform	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Bromomethane	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
Carbon disulfide	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
Carbon tetrachloride	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Chlorobenzene	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
Chloroethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27

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Results of Trip Blank

Client Sample ID: **Trip Blank** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600021 Lab Project ID: 1168600

Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Chloroform	0.500 U	1.00	0.300	ug/L	1		09/27/16 01:27
Chloromethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
cis-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
cis-1,3-Dichloropropene	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
Dibromochloromethane	0.250 U	0.500	0.150	ug/L	1		09/27/16 01:27
Dibromomethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Dichlorodifluoromethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Freon-113	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
Hexachlorobutadiene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Isopropylbenzene (Cumene)	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Methylene chloride	2.50 U	5.00	1.00	ug/L	1		09/27/16 01:27
Methyl-t-butyl ether	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
Naphthalene	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
n-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
n-Propylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/27/16 01:27
sec-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Styrene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
tert-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Tetrachloroethene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Toluene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
trans-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
trans-1,3-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Trichloroethene	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Trichlorofluoromethane	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Vinyl acetate	5.00 U	10.0	3.10	ug/L	1		09/27/16 01:27
Vinyl chloride	0.500 U	1.00	0.310	ug/L	1		09/27/16 01:27
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		09/27/16 01:27
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	81-118		%	1		09/27/16 01:27
4-Bromofluorobenzene (surr)	94.8	85-114		%	1		09/27/16 01:27
Toluene-d8 (surr)	96.1	89-112		%	1		09/27/16 01:27

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Results of Trip Blank

Client Sample ID: **Trip Blank** Client Project ID: **Interior Texaco** Lab Sample ID: 1168600021 Lab Project ID: 1168600 Collection Date: 09/15/16 18:15 Received Date: 09/20/16 09:57 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS16224 Analytical Method: SW8260B Analyst: TJT Analytical Date/Time: 09/27/16 01:27 Container ID: 1168600021-C Prep Batch: VXX29649 Prep Method: SW5030B Prep Date/Time: 09/26/16 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Print Date: 10/10/2016 11:35:53AM

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Results of Trip Blank							
Client Sample ID: Trip Blank Client Project ID: Interior Texaco Lab Sample ID: 1168600022 Lab Project ID: 1168600	Collection Date: 09/14/16 13:35 Received Date: 09/20/16 09:57 Matrix: Soil/Solid (dry weight) Solids (%): Location:						
Results by Volatile Fuels			_				
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.802 J	<u>LOQ/CL</u> 2.59	<u>DL</u> 0.777	<u>Units</u> mg/Kg	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 09/26/16 17:44
Surrogates							
4-Bromofluorobenzene (surr)	91.8	50-150		%	1		09/26/16 17:44
Batch Information							
Analytical Batch: VFC13326 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 09/26/16 17:44 Container ID: 1168600022-A			Prep Batch: N Prep Method: Prep Date/Tin Prep Initial Wt Prep Extract N	/XX29639 SW5035A he: 09/14/1 ./Vol.: 48.2 /ol: 25 mL	6 13:35 254 g		
			5		55	Allowable	
Parameter		<u>LOQ/CL</u> 0.0130	<u>DL</u> 0.00414	<u>Units</u> ma/Ka	<u>DF</u> 1	Limits	
Ethylbenzene	0.00030 0	0.0150	0.00414	ma/Ka	1		09/26/16 17:44
	0.00881	0.0259	0.00000	ma/Ka	1		09/26/16 17:44
	0.0215.1	0.0200	0.00000	ma/Ka	1		09/26/16 17:44
Toluene	0.0130 U	0.0259	0.00808	mg/Kg	1		09/26/16 17:44
Surrogates							
1,4-Difluorobenzene (surr)	91.8	72-119		%	1		09/26/16 17:44
Batch Information							
Analytical Batch: VFC13326 Analytical Method: SW8021B Analyst: ST Analytical Date/Time: 09/26/16 17:44 Container ID: 1168600022-A			Prep Batch: N Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract N	/XX29639 SW5035A ne: 09/14/1 ./Vol.: 48.2 /ol: 25 mL	6 13:35 254 g		

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Method Blank						
Blank ID: MB for HBN 1 Blank Lab ID: 1353418	743451 [SPT/10003]	Matrix: Soil/Solid (dry weight)				
QC for Samples: 1168600007, 1168600008 1168600016, 1168600017	3, 1168600009, 1168600010, 116 7, 1168600018, 1168600019, 116	58600011, 1168600012 58600020	2, 1168600013,	1168600014, 1168600015,		
Results by SM21 25400	3					
Parameter Total Solids	<u>Results</u> 100	LOQ/CL	<u>DL</u>	<u>Units</u> %		
atch Information						
Analytical Batch: SPT ² Analytical Method: SM Instrument: Analyst: IAS Analytical Date/Time: 9	10003 121 2540G 9/20/2016 5:55:00PM					

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Duplicate Sample Summary	

Duplicate Sample Summary						
Original Sample ID: 116555 Duplicate Sample ID: 13534 QC for Samples: 1168600007	3003 19		Analysis Date: 09/20/2016 17:55 Matrix: Soil/Solid (dry weight)			
110000007						
Results by SM21 2540G						
NAME	Original	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL	
Total Solids	85.8	85.9	%	0.08	(< 15)	
Batch Information						
Analytical Batch: SPT10003 Analytical Method: SM21 254 Instrument: Analyst: IAS	0G					
Print Date: 10/10/2016 11:36:00AM						

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Duplicate Sample Summar					
Original Sample ID: 116860 Duplicate Sample ID: 13534 QC for Samples: 1168600007, 1168600008, 1	7 0007 120 1168600009, 11686	600010, 1168600011	Analysis Date: Matrix: Soil/So	09/20/2016 17:55 lid (dry weight)	
Results by SM21 2540G					
NAME	Original	Duplicate	Units	<u>RPD (%)</u>	RPD CL
Total Solids	95.4	95.4	%	0.08	(< 15)
Batch Information Analytical Batch: SPT10003 Analytical Method: SM21 254 Instrument: Analyst: IAS	40G				

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Duplicate Sample Summa	ary				
Original Sample ID: 1168600011 Duplicate Sample ID: 1353421			Analysis Date: Matrix: Soil/So	09/20/2016 17:55 lid (dry weight)	
QC for Samples:					
1168600008, 1168600009	, 1168600010, 11686	600011, 1168600012,	1168600013, 116	8600014	
Results by SM21 2540G					
NAME	Original	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL
Total Solids	74.4	74.2	%	0.26	(< 15)
Batch Information					
Analytical Batch: SPT1000 Analytical Method: SM212 Instrument: Analyst: IAS	3 2540G				

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Duplicate Sample Summary	/				
Original Sample ID: 1168600014 Duplicate Sample ID: 1353422			Analysis Date: Matrix: Soil/So	09/20/2016 17:55 lid (dry weight)	
C for Samples:					
168600012, 1168600013, 1	168600014, 11686	600015, 1168600016,	1168600017, 116	8600018	
Results by SM21 2540G					
<u>IAME</u>	Original	Duplicate	Units	<u>RPD (%)</u>	RPD CL
otal Solids	74.6	75.4	%	1.10	(< 15)
Satch Information					
Analytical Batch: SPT10003 Analytical Method: SM21 254 Instrument: Analyst: JAS	40G				
Analysi. 140					

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Duplicate Sample Summ	ary				
Original Sample ID: 1168	600018		Analysis Date:	09/20/2016 17:55	
Duplicate Sample ID: 135	3423		Matrix: Soil/So	lia (ary weight)	
	1169600017 11696		1169600020		
	5, 110000017, 11000	00016, 1106000019,	110000020		
Results by SM21 2540G					
NAME	Original	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL
Total Solids	95.8	95.7	%	0.13	(< 15)
Batch Information					
Analytical Batch: SPT1000 Analytical Method: SM212 Instrument: Analyst: IAS	13 2540G				

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Method Blank

Blank ID: MB for HBN 1743777 [VXX/29621] Blank Lab ID: 1354116 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600005, 1168600006

Results by SW8260B

Parameter	<u>Results</u>	LOQ/CL	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.400J	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Method Blank

Blank ID: MB for HBN 1743777 [VXX/29621] Blank Lab ID: 1354116 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600005, 1168600006

Results by SW8260B

Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>
Chloromethane	0.390J	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	103	81-118		%
4-Bromofluorobenzene (surr)	97.9	85-114		%
Toluene-d8 (surr)	102	89-112		%

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Blank ID: MB for HBl Blank Lab ID: 13541 QC for Samples: 1168600005, 1168600	N 1743777 [VXX/29621] 16 006	Matri	x: Water (Surfa	ace, Eff., Ground)	
Results by SW8260E	3				
Results by SW8260E	3 <u>Results</u>	LOQ/CL	DL	Units	
Results by SW8260E Parameter Batch Information	B Results	LOQ/CL	DL	<u>Units</u>	



Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [VXX29621] Blank Spike Lab ID: 1354117 Date Analyzed: 09/21/2016 09:55 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29621] Spike Duplicate Lab ID: 1354118 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600005, 1168600006

Results by SW8260B

	l	Blank Spike	e (ug/L)	9	Spike Duplic	cate (ug/L)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
1,1,1,2-Tetrachloroethane	30	32.4	108	30	33.3	111	(78-124)	2.90	(< 20)
1,1,1-Trichloroethane	30	32.9	110	30	32.6	109	(74-131)	0.86	(< 20)
1,1,2,2-Tetrachloroethane	30	26.3	88	30	28.3	94	(71-121)	7.40	(< 20)
1,1,2-Trichloroethane	30	28.8	96	30	29.7	99	(80-119)	2.80	(< 20)
1,1-Dichloroethane	30	30.7	102	30	31.0	103	(77-125)	0.91	(< 20)
1,1-Dichloroethene	30	30.1	100	30	31.0	103	(71-131)	2.80	(< 20)
1,1-Dichloropropene	30	31.3	104	30	31.8	106	(79-125)	1.60	(< 20)
1,2,3-Trichlorobenzene	30	30.2	101	30	35.3	118	(69-129)	15.30	(< 20)
1,2,3-Trichloropropane	30	29.3	98	30	30.2	101	(73-122)	3.00	(< 20)
1,2,4-Trichlorobenzene	30	31.2	104	30	33.2	111	(69-130)	6.20	(< 20)
1,2,4-Trimethylbenzene	30	28.5	95	30	30.4	101	(79-124)	6.70	(< 20)
1,2-Dibromo-3-chloropropane	30	28.2	94	30	31.7	106	(62-128)	11.80	(< 20)
1,2-Dibromoethane	30	30.8	103	30	32.0	107	(77-121)	3.90	(< 20)
1,2-Dichlorobenzene	30	30.0	100	30	31.3	104	(80-119)	4.10	(< 20)
1,2-Dichloroethane	30	31.5	105	30	30.9	103	(73-128)	1.70	(< 20)
1,2-Dichloropropane	30	32.5	108	30	32.6	109	(78-122)	0.34	(< 20)
1,3,5-Trimethylbenzene	30	30.1	100	30	30.8	103	(75-124)	2.30	(< 20)
1,3-Dichlorobenzene	30	31.1	104	30	31.7	106	(80-119)	2.00	(< 20)
1,3-Dichloropropane	30	29.3	98	30	30.5	102	(80-119)	3.80	(< 20)
1,4-Dichlorobenzene	30	31.8	106	30	32.5	108	(79-118)	2.00	(< 20)
2,2-Dichloropropane	30	31.7	106	30	31.6	105	(60-139)	0.54	(< 20)
2-Butanone (MEK)	90	93.6	104	90	96.2	107	(56-143)	2.70	(< 20)
2-Chlorotoluene	30	31.0	103	30	31.0	103	(79-122)	0.16	(< 20)
2-Hexanone	90	80.7	90	90	92.2	102	(57-139)	13.20	(< 20)
4-Chlorotoluene	30	30.4	101	30	30.0	100	(78-122)	1.50	(< 20)
4-Isopropyltoluene	30	29.7	99	30	31.1	104	(77-127)	4.50	(< 20)
4-Methyl-2-pentanone (MIBK)	90	93.0	103	90	97.6	108	(67-130)	4.80	(< 20)
Benzene	30	30.4	101	30	30.5	102	(79-120)	0.23	(< 20)
Bromobenzene	30	32.2	107	30	31.3	104	(80-120)	3.00	(< 20)
Bromochloromethane	30	32.6	109	30	32.1	107	(78-123)	1.60	(< 20)
Bromodichloromethane	30	34.1	114	30	33.8	113	(79-125)	0.94	(< 20)
Bromoform	30	33.8	113	30	34.3	114	(66-130)	1.40	(< 20)
Bromomethane	30	42.6	142	* 30	44.5	148	* (53-141)	4.30	(< 20)
Carbon disulfide	45	41.4	92	45	43.1	96	(64-133)	3.90	(< 20)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [VXX29621] Blank Spike Lab ID: 1354117 Date Analyzed: 09/21/2016 09:55 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29621] Spike Duplicate Lab ID: 1354118 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600005, 1168600006

Results by SW8260B

		Blank Spike	e (ug/L)	S	Spike Duplic	ate (ug/L)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Carbon tetrachloride	30	33.2	111	30	33.2	111	(72-136)	0.06	(< 20)
Chlorobenzene	30	30.7	102	30	31.8	106	(82-118)	3.40	(< 20)
Chloroethane	30	31.2	104	30	31.9	106	(60-138)	2.20	(< 20)
Chloroform	30	31.7	106	30	31.3	104	(79-124)	1.10	(< 20)
Chloromethane	30	40.7	136	30	47.5	158	* (50-139)	15.40	(< 20)
cis-1,2-Dichloroethene	30	29.0	97	30	29.1	97	(78-123)	0.48	(< 20)
cis-1,3-Dichloropropene	30	30.9	103	30	31.8	106	(75-124)	2.60	(< 20)
Dibromochloromethane	30	33.5	112	30	33.7	112	(74-126)	0.62	(< 20)
Dibromomethane	30	30.4	101	30	30.3	101	(79-123)	0.03	(< 20)
Dichlorodifluoromethane	30	28.7	96	30	29.6	99	(32-152)	3.40	(< 20)
Ethylbenzene	30	29.9	100	30	31.4	105	(79-121)	5.00	(< 20)
Freon-113	45	49.0	109	45	50.3	112	(70-136)	2.60	(< 20)
Hexachlorobutadiene	30	34.1	114	30	34.0	113	(66-134)	0.29	(< 20)
Isopropylbenzene (Cumene)	30	31.2	104	30	31.4	105	(72-131)	0.58	(< 20)
Methylene chloride	30	29.7	99	30	30.5	102	(74-124)	2.70	(< 20)
Methyl-t-butyl ether	45	51.9	115	45	53.8	119	(71-124)	3.60	(< 20)
Naphthalene	30	28.8	96	30	34.5	115	(61-128)	18.10	(< 20)
n-Butylbenzene	30	26.8	89	30	30.4	101	(75-128)	12.40	(< 20)
n-Propylbenzene	30	30.5	102	30	29.9	100	(76-126)	1.70	(< 20)
o-Xylene	30	30.8	103	30	31.7	106	(78-122)	3.20	(< 20)
P & M -Xylene	60	62.1	104	60	62.7	104	(80-121)	0.91	(< 20)
sec-Butylbenzene	30	28.0	93	30	30.4	101	(77-126)	8.10	(< 20)
Styrene	30	31.3	104	30	31.2	104	(78-123)	0.19	(< 20)
tert-Butylbenzene	30	30.0	100	30	30.9	103	(78-124)	3.00	(< 20)
Tetrachloroethene	30	32.4	108	30	33.0	110	(74-129)	1.70	(< 20)
Toluene	30	27.9	93	30	28.2	94	(80-121)	1.20	(< 20)
trans-1,2-Dichloroethene	30	30.7	102	30	31.2	104	(75-124)	1.40	(< 20)
trans-1,3-Dichloropropene	30	29.8	99	30	30.3	101	(73-127)	1.90	(< 20)
Trichloroethene	30	32.2	107	30	32.3	108	(79-123)	0.34	(< 20)
Trichlorofluoromethane	30	34.2	114	30	34.8	116	(65-141)	1.70	(< 20)
Vinyl acetate	30	31.3	104	30	31.8	106	(54-146)	1.90	(< 20)
Vinyl chloride	30	31.9	106	30	34.2	114	(58-137)	7.00	(< 20)
Xylenes (total)	90	92.9	103	90	94.4	105	(79-121)	1.70	(< 20)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [VXX29621] Blank Spike Lab ID: 1354117 Date Analyzed: 09/21/2016 09:55 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29621] Spike Duplicate Lab ID: 1354118 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600005, 1168600006

Results by SW8260B

		Blank Spil	ke (%)		Spike Dup	licate (%)			
<u>Parameter</u>	<u>Spike</u>	Result	Rec (%)	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	106	106	30	104	104	(81-118)	2.00	
4-Bromofluorobenzene (surr)	30	99.9	100	30	92.2	92	(85-114)	8.00	
Toluene-d8 (surr)	30	94.4	94	30	95.8	96	(89-112)	1.40	

Batch Information

Analytical Batch: VMS16214 Analytical Method: SW8260B Instrument: VPA 780/5975 GC/MS Analyst: TJT Prep Batch: VXX29621 Prep Method: SW5030B Prep Date/Time: 09/21/2016 06:00 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Iethod Blank Blank ID: MB for HBN 1744120 [VXX/29639] Blank Lab ID: 1354751 C for Samples: 168600011, 1168600012, 1168600013, 11686000	Mat	Matrix: Soil/Solid (dry weight) 600015, 1168600022							
Results by AK101									
arameter Results	<u>LOQ/CL</u> 2 50	<u>DL</u> 0.750	<u>Units</u> ma/Ka						
urrogates -Bromofluorobenzene (surr) 85.4	50-150	0.700	%						
Analytical Batch: VFC13326 Analytical Method: AK101 Instrument: Agilent 7890A PID/FID Analyst: ST Analytical Date/Time: 9/26/2016 5:07:00PM	Prep E Prep I Prep I Prep I Prep E	Batch: VXX29639 Method: SW5035 Date/Time: 9/25/2 nitial Wt./Vol.: 50 Extract Vol: 25 m) A 2016 12:30:00AM g L						

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Blank Spike ID: LCS for HBN 1168600 [VXX29639] Blank Spike Lab ID: 1354754 Date Analyzed: 09/26/2016 16:11 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29639] Spike Duplicate Lab ID: 1354755 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600011, 1168600012, 1168600013, 1168600014, 1168600015, 1168600022

	E	Blank Spike (mg/Kg)			pike Duplic	ate (mg/Kg)					
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CI		
Gasoline Range Organics	12.5	10.8	87	12.5	10.5	84	(60-120)	3.10	(< 20)		
urrogates											
I-Bromofluorobenzene (surr)	1.25	89.5	90	1.25	91.6	92	(50-150)	2.40			
Analytical Batch: VFC13326 Analytical Method: AK101				Pre Pre	p Batch: V o Method:	XX29639 SW5035A					
Instrument: Agilent 7890A PI	D/FID			Pre	p Date/Tim	e: 09/25/201	6 00:30				
Analyst: ST					Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL						

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Method Blank

Blank ID: MB for HBN 1744120 [VXX/29639] Blank Lab ID: 1354751 Matrix: Soil/Solid (dry weight)

QC for Samples:

1168600011, 1168600012, 1168600013, 1168600014, 1168600015, 1168600022

Results by SW8021B					
Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>	
Benzene	0.00625U	0.0125	0.00400	mg/Kg	
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg	
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg	
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg	
Toluene	0.0125U	0.0250	0.00780	mg/Kg	
Surrogates					
1,4-Difluorobenzene (surr)	90.3	72-119		%	
Batch Information					

Analytical Batch: VFC13326 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Analytical Date/Time: 9/26/2016 5:07:00PM Prep Batch: VXX29639 Prep Method: SW5035A Prep Date/Time: 9/25/2016 12:30:00AM Prep Initial Wt./Vol.: 50 g Prep Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:09AM



Blank Spike ID: LCS for HBN 1168600 [VXX29639] Blank Spike Lab ID: 1354752 Date Analyzed: 09/26/2016 15:34 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29639] Spike Duplicate Lab ID: 1354753 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600011, 1168600012, 1168600013, 1168600014, 1168600015, 1168600022

	E	Blank Spike	(mg/Kg)	Spike Duplicate (mg/Kg)					
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Benzene	1.25	1.41	112	1.25	1.40	112	(75-125)	0.34	(< 20)
Ethylbenzene	1.25	1.26	101	1.25	1.25	100	(75-125)	0.54	(< 20)
o-Xylene	1.25	1.20	96	1.25	1.20	96	(75-125)	0.21	(< 20)
P & M -Xylene	2.50	2.51	100	2.50	2.52	101	(80-125)	0.39	(< 20)
Toluene	1.25	1.26	101	1.25	1.25	100	(70-125)	1.10	(< 20)
urrogates									
1,4-Difluorobenzene (surr)	1.25	94	94	1.25	97.6	98	(72-119)	3.80	

Analytical Batch: VFC13326 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST

Prep Batch: VXX29639 Prep Method: SW5035A Prep Date/Time: 09/25/2016 00:30 Spike Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL Dupe Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:10AM



Matrix Spike Summary

Original Sample ID: 1165533001 MS Sample ID: 1354756 MS MSD Sample ID: 1354757 MSD Analysis Date: 09/26/2016 18:59 Analysis Date: 09/26/2016 19:17 Analysis Date: 09/26/2016 19:36 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600011, 1168600012, 1168600013, 1168600014, 1168600015, 1168600022

		Mat	rix Snike (r	na/Ka)		Snike	Spike Duplicate (mg/Kg)					
Paramotor	Samplo	Spiko	Pocult	Regult Reg (%		Spiko	Popult	Poc (9/ '0/_)	CL		
Benzene	<u>3ampie</u> 7.50	7.51	12.1	62	<u>(70)</u> *	7.51	12.3	64	<u>70)</u> *	<u>CL</u> 75-125	1.80	(< 20)
Ethylbenzene	20.1	7.51	19.0	-14	*	7.51	19.6	-7	*	75-125	2.80	(< 20)
o-Xylene	29.4	7.51	24.7	-62	*	7.51	26.0	-44	*	75-125	5.10	(< 20)
P & M -Xylene	59.6	15.1	50.5	-60	*	15.1	53.0	-44	*	80-125	4.70	(< 20)
Toluene	1.87	7.51	8.39	87		7.51	8.39	87		70-125	0.07	(< 20)
Surrogates												
1,4-Difluorobenzene (surr)		7.51	7.02	93		7.51	7.32	97		72-119	4.10	

Analytical Batch: VFC13326 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Analytical Date/Time: 9/26/2016 7:17:00PM

Prep Batch: VXX29639 Prep Method: AK101 Extraction (S) Prep Date/Time: 9/25/2016 12:30:00AM Prep Initial Wt./Vol.: 22.69g Prep Extract Vol: 25.00mL

Print Date: 10/10/2016 11:36:12AM

			. 301/30110 (01	y weight)
QC for Samples: 1168600008, 1168600016, 11686	500017, 1168600018, 110	58600020		
Results by AK101)		
Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	85.4	50-150		%
atch Information				
Analytical Batch: VFC13334		Prep Bai	tch: VXX29645	
Analytical Method: AK101		Prep Me	thod: SW5035A	
Instrument: Agilent 7890 PID/	FID	Prep Da	te/Time: 9/27/20	016 12:30:00AM
Analyst: 51 Analytical Date/Time: 9/27/20	16 12·29·00PM	Prep Init Prep Ext	ract Vol: 25 ml	y
. ,				

Print Date: 10/10/2016 11:36:13AM

Blank Spike ID: LCS for HBN 1168600 [VXX29645] Blank Spike Lab ID: 1354973 Date Analyzed: 09/27/2016 11:32 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29645] Spike Duplicate Lab ID: 1354974 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600008, 1168600016, 1168600017, 1168600018, 1168600020

	E	Blank Spike	(mg/Kg)	mg/Kg) Spike Duplicate (mg/Kg)						
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	<u>RPD C</u>	
Gasoline Range Organics	12.5	12.4	99	12.5	12.9	103	(60-120)	4.10	(< 20)	
irrogates										
4-Bromofluorobenzene (surr)	1.25	84.3	84	1.25	90.3	90	(50-150)	6.80		
Analytical Batch: VFC13334 Analytical Method: AK101				Pre Pre	p Batch: V	XX29645 SW5035A				
Instrument: Agilent 7890 PID	/FID			Pre	p Date/Tim	e: 09/27/201	6 00:30			
Analyst: ST			Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL							

Print Date: 10/10/2016 11:36:14AM

Method Blank

Blank ID: MB for HBN 1744163 [VXX/29645] Blank Lab ID: 1354970 Matrix: Soil/Solid (dry weight)

QC for Samples:

1168600008, 1168600016, 1168600017, 1168600018, 1168600020

Results by SW8021B					
Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>	
Benzene	0.00625U	0.0125	0.00400	mg/Kg	
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg	
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg	
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg	
Toluene	0.0125U	0.0250	0.00780	mg/Kg	
Surrogates					
1,4-Difluorobenzene (surr)	90.1	72-119		%	
Batch Information					

Analytical Batch: VFC13334 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST Analytical Date/Time: 9/27/2016 12:29:00PM Prep Batch: VXX29645 Prep Method: SW5035A Prep Date/Time: 9/27/2016 12:30:00AM Prep Initial Wt./Vol.: 50 g Prep Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:16AM



Blank Spike ID: LCS for HBN 1168600 [VXX29645] Blank Spike Lab ID: 1354971 Date Analyzed: 09/27/2016 10:54 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29645] Spike Duplicate Lab ID: 1354972 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600008, 1168600016, 1168600017, 1168600018, 1168600020

Results by SW8021B									
	E	Blank Spike (mg/Kg)			pike Duplic	ate (mg/Kg)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Benzene	1.25	1.43	115	1.25	1.48	118	(75-125)	3.20	(< 20)
Ethylbenzene	1.25	1.43	115	1.25	1.49	119	(75-125)	3.70	(< 20)
o-Xylene	1.25	1.41	112	1.25	1.44	115	(75-125)	2.20	(< 20)
P & M -Xylene	2.50	2.87	115	2.50	2.97	119	(80-125)	3.40	(< 20)
Toluene	1.25	1.46	117	1.25	1.52	121	(70-125)	3.70	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	1.25	99.2	99	1.25	95.8	96	(72-119)	3.40	

Batch Information

Analytical Batch: VFC13334 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST Prep Batch: VXX29645 Prep Method: SW5035A Prep Date/Time: 09/27/2016 00:30 Spike Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL Dupe Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:18AM



Matrix Spike Summary

Original Sample ID: 1168588001 MS Sample ID: 1354975 MS MSD Sample ID: 1354976 MSD Analysis Date: 09/27/2016 13:45 Analysis Date: 09/27/2016 14:04 Analysis Date: 09/27/2016 14:23 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600008, 1168600016, 1168600017, 1168600018, 1168600020

Results by SW8021B										
		Matrix Spike (mg/Kg)			Spike	Duplicate	(mg/Kg)			
Parameter	Sample	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Benzene	0.0129U	1.73	1.95	113	1.73	2.02	117	75-125	3.40	(< 20)
Ethylbenzene	0.0257U	1.73	1.95	113	1.73	2.01	116	75-125	2.60	(< 20)
o-Xylene	0.0257U	1.73	1.87	109	1.73	1.97	114	75-125	4.50	(< 20)
P & M -Xylene	0.0515U	3.44	3.87	112	3.44	4.03	117	80-125	4.00	(< 20)
Toluene	0.0257U	1.73	1.95	113	1.73	1.98	115	70-125	1.80	(< 20)
Surrogates										
1,4-Difluorobenzene (surr)		1.73	1.67	97	1.73	1.65	96	72-119	0.97	
Batch Information										

Analytical Batch: VFC13334 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST Analytical Date/Time: 9/27/2016 2:04:00PM Prep Batch: VXX29645 Prep Method: AK101 Extraction (S) Prep Date/Time: 9/27/2016 12:30:00AM Prep Initial Wt./Vol.: 48.61g Prep Extract Vol: 25.00mL

Print Date: 10/10/2016 11:36:19AM

SGS	

Method Blank]						
Blank ID: MB for HBN 17441 Blank Lab ID: 1354982	Blank ID: MB for HBN 1744165 [VXX/29647] Blank Lab ID: 1354982		Matrix: Water (Surface, Eff., Ground)					
QC for Samples: 1168600001, 1168600002, 116	8600003, 1168600004, 11	68600005, 1168600021						
Results by AK101)						
<u>Parameter</u> Gasoline Range Organics	<u>Results</u> 0.0500U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L				
Surrogates 4-Bromofluorobenzene (surr)	85.6	50-150		%				
Batch Information								
Analytical Batch: VFC13331 Analytical Method: AK101 Instrument: Agilent 7890A F Analyst: ST Analytical Date/Time: 9/27/2	1 PID/FID 2016 11:37:00AM	Prep Bat Prep Mer Prep Dat Prep Initi Prep Ext	ch: VXX29647 thod: SW50301 ce/Time: 9/27/2 al Wt./Vol.: 5 m ract Vol: 5 mL	B 016 6:00:00AM nL				

Print Date: 10/10/2016 11:36:20AM

Blank Spike ID: LCS for HBN 1168600 [VXX29647] Blank Spike Lab ID: 1354985 Date Analyzed: 09/27/2016 12:32 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29647] Spike Duplicate Lab ID: 1354986 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600001, 1168600002, 1168600003, 1168600004, 1168600005, 1168600021

	I	Blank Spike	e (mg/L)	S	pike Duplic	cate (mg/L)			
Parameter	<u>Spike</u>	Result	Rec (%)	Spike	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD C
Gasoline Range Organics	1.00	0.868	87	1.00	0.770	77	(60-120)	12.00	(< 20)
urrogates									
4-Bromofluorobenzene (surr)	0.0500	88.2	88	0.0500	90.6	91	(50-150)	2.80	
Analytical Method: AK101 Instrument: Agilent 7890A P Analyst: ST	Prep Batch: VXX29647 Prep Method: SW5030B ID/FID Prep Date/Time: 09/27/2016 06:00 Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL								

Print Date: 10/10/2016 11:36:22AM



Method Blank

Blank ID: MB for HBN 1744165 [VXX/29647] Blank Lab ID: 1354982 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1168600001, 1168600002, 1168600003, 1168600004, 1168600005, 1168600021

Results by SW8021B	Results by SW8021B			
Parameter	<u>Results</u>	LOQ/CL	DL	<u>Units</u>
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Surrogates				
1,4-Difluorobenzene (surr)	95.1	77-115		%
Batch Information				

Analytical Batch: VFC13331 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Analytical Date/Time: 9/27/2016 11:37:00AM Prep Batch: VXX29647 Prep Method: SW5030B Prep Date/Time: 9/27/2016 6:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Print Date: 10/10/2016 11:36:24AM



Blank Spike ID: LCS for HBN 1168600 [VXX29647] Blank Spike Lab ID: 1354983 Date Analyzed: 09/27/2016 12:14 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29647] Spike Duplicate Lab ID: 1354984 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600001, 1168600002, 1168600003, 1168600004, 1168600005, 1168600021

Results by SW8021B									
		Blank Spike (ug/L) Spike Duplicate (ug/L)							
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Benzene	100	110	110	100	110	110	(80-120)	0.15	(< 20)
Ethylbenzene	100	99.6	100	100	99.2	99	(75-125)	0.45	(< 20)
o-Xylene	100	96.0	96	100	95.6	96	(80-120)	0.42	(< 20)
P & M -Xylene	200	199	100	200	198	99	(75-130)	0.83	(< 20)
Toluene	100	101	101	100	101	101	(75-120)	0.02	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	50	98.8	99	50	98.6	99	(77-115)	0.20	
Batch Information									

Analytical Batch: VFC13331 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Prep Batch: VXX29647 Prep Method: SW5030B Prep Date/Time: 09/27/2016 06:00 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

Print Date: 10/10/2016 11:36:25AM

Method Blank]							
Blank ID: MB for HBN 1744 Blank Lab ID: 1354987	Blank ID: MB for HBN 1744166 [VXX/29648] Blank Lab ID: 1354987		Matrix: Soil/Solid (dry weight)						
QC for Samples: 1168600007, 1168600009, 116	68600010								
Results by AK101									
Parameter Gasoline Range Organics	<u>Results</u> 1.25U	<u>LOQ/CL</u> 2.50	<u>DL</u> 0.750	<u>Units</u> mg/Kg					
Surrogates	84.6	50 150		0/					
Batch Information									
Analytical Batch: VFC1333	0	Prep Bato Prep Met	h: VXX29648	Δ					
Instrument: Agilent 7890A F	PID/FID	Prep Date	e/Time: 9/27/2	016 12:30:00AM					
Analyst: ST Analytical Date/Time: 9/27/	2016 10:27:00PM	Prep Initial Wt./Vol.: 50 g Prep Extract Vol: 25 mL							

Print Date: 10/10/2016 11:36:27AM



Blank Spike ID: LCS for HBN 1168600 [VXX29648] Blank Spike Lab ID: 1354990 Date Analyzed: 09/27/2016 21:32 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29648] Spike Duplicate Lab ID: 1354991 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600007, 1168600009, 1168600010

Results by AK101			_						
	E	Blank Spike	(mg/Kg)	S	pike Duplic	ate (mg/Kg)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Gasoline Range Organics	12.5	10.4	84	12.5	10.8	86	(60-120)	3.00	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	86.8	87	1.25	90.5	91	(50-150)	4.20	
Batch Information									
Analytical Batch: VFC13330 Analytical Method: AK101 Instrument: Agilent 7890A PII Analyst: ST	D/FID			Pre Pre Pre Spi	p Batch: V p Method: p Date/Tim ke Init Wt./\	XX29648 SW5035A e: 09/27/201 /ol.: 12.5 mg	6 00:30 g/Kg Extrac	t Vol: 25 mL	
				Dup	be Init Wt./V	/ol.: 12.5 mg	g/Kg Extract	Vol: 25 mL	

Print Date: 10/10/2016 11:36:29AM

SGS Method Blank

Blank ID: MB for HBN 1744166 [VXX/29648] Blank Lab ID: 1354987 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600009, 1168600010

Results by SW8021B

Parameter	<u>Results</u>	LOQ/CL	<u>DL</u>	<u>Units</u>
Benzene	0.00625U	0.0125	0.00400	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
Surrogates				
1,4-Difluorobenzene (surr)	94.1	72-119		%

Batch Information

Analytical Batch: VFC13330 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Analytical Date/Time: 9/27/2016 10:27:00PM Prep Batch: VXX29648 Prep Method: SW5035A Prep Date/Time: 9/27/2016 12:30:00AM Prep Initial Wt./Vol.: 50 g Prep Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:30AM



Blank Spike ID: LCS for HBN 1168600 [VXX29648] Blank Spike Lab ID: 1354988 Date Analyzed: 09/27/2016 20:55 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29648] Spike Duplicate Lab ID: 1354989 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600007, 1168600009, 1168600010

Results by SW8021	В
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	E	Blank Spike	(mg/Kg)	S	pike Duplic	ate (mg/Kg)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Benzene	1.25	1.35	108	1.25	1.29	104	(75-125)	4.40	(< 20)
Ethylbenzene	1.25	1.20	96	1.25	1.16	92	(75-125)	4.20	(< 20)
o-Xylene	1.25	1.12	90	1.25	1.07	86	(75-125)	4.80	(< 20)
P & M -Xylene	2.50	2.39	96	2.50	2.24	90	(80-125)	6.70	(< 20)
Toluene	1.25	1.26	101	1.25	1.22	97	(70-125)	3.30	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	1.25	92.7	93	1.25	92.7	93	(72-119)	0.09	

Batch Information

Analytical Batch: VFC13330 Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Prep Batch: VXX29648 Prep Method: SW5035A Prep Date/Time: 09/27/2016 00:30 Spike Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL Dupe Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:32AM



Matrix Spike Summary

Original Sample ID: 1168600007 MS Sample ID: 1354992 MS MSD Sample ID: 1354993 MSD QC for Samples: 1168600007, 1168600009, 1168600010

Results by SW8021B										
		Mat	rix Spike (n	ng/Kg)	Spike	Duplicate	(mg/Kg)			
Parameter	Sample	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Benzene	0.00720U	1.32	1.35	103	1.32	1.39	106	75-125	2.90	(< 20)
Ethylbenzene	0.0144U	1.32	1.19	91	1.32	1.24	94	75-125	3.30	(< 20)
o-Xylene	0.0340	1.32	1.15	85	1.32	1.19	88	75-125	3.60	(< 20)
P & M -Xylene	0.0725	2.63	2.38	88	2.63	2.51	92	80-125	5.00	(< 20)
Toluene	0.0144U	1.32	1.22	93	1.32	1.25	94	70-125	1.90	(< 20)
Surrogates										
1,4-Difluorobenzene (surr)		1.32	1.17	89	1.32	1.21	91	72-119	2.60	
Batch Information										
Analytical Batch: VFC1333 Analytical Method: SW802	0 1B			Prep Prep	Batch: \ Method:	/XX29648 AK101 E	xtraction (S))		

Analytical Method: SW8021B Instrument: Agilent 7890A PID/FID Analyst: ST Analytical Date/Time: 9/28/2016 4:02:00AM Prep Batch: VXX29648 Prep Method: AK101 Extraction (S) Prep Date/Time: 9/27/2016 12:30:00AM Prep Initial Wt./Vol.: 49.74g Prep Extract Vol: 25.00mL

Print Date: 10/10/2016 11:36:34AM

Method Blank

Blank ID: MB for HBN 1744171 [VXX/29649] Blank Lab ID: 1355008

QC for Samples: 1168600021

Results by SW8260B

Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Matrix: Water (Surface, Eff., Ground)

Method Blank

Blank ID: MB for HBN 1744171 [VXX/29649] Blank Lab ID: 1355008

QC for Samples: 1168600021

Results by SW8260B

Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	100	81-118		%
4-Bromofluorobenzene (surr)	97	85-114		%
Toluene-d8 (surr)	102	89-112		%

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Method Blank]			
Blank ID: MB for HB Blank Lab ID: 13550	Matrix	: Water (Su	rface, Eff., Ground)		
QC for Samples: 1168600021					
Results by SW8260E	5				
Parameter Batch Information	Results	LOQ/CL	<u>DL</u>	Units	
Analytical Batch: V Analytical Method: Instrument: VSA A Analyst: TJT Analytical Date/Tim	MS16224 SW8260B gilent GC/MS 7890B/5977A e: 9/26/2016 7:33:00PM	Prep Ba Prep Me Prep Da Prep Init Prep Ext	tch: VXX296 thod: SW503 te/Time: 9/26 ial Wt./Vol.: { tract Vol: 5 m	49 30B 5/2016 6:00:00AM 5 mL 1L	

Print Date: 10/10/2016 11:36:35AM



Blank Spike ID: LCS for HBN 1168600 [VXX29649] Blank Spike Lab ID: 1355009 Date Analyzed: 09/26/2016 20:16 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29649] Spike Duplicate Lab ID: 1355010 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600021

Results by SW8260B

		Blank Spike	e (ug/L)	;	Spike Dupli	cate (ug/L)			
Parameter	<u>Spike</u>	Result	Rec (%)	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
1,1,1,2-Tetrachloroethane	30	31.4	105	30	30.7	102	(78-124)	2.20	(< 20)
1,1,1-Trichloroethane	30	33.9	113	30	33.7	112	(74-131)	0.65	(< 20)
1,1,2,2-Tetrachloroethane	30	33.1	110	30	32.9	110	(71-121)	0.82	(< 20)
1,1,2-Trichloroethane	30	33.1	110	30	32.4	108	(80-119)	2.10	(< 20)
1,1-Dichloroethane	30	31.2	104	30	31.2	104	(77-125)	0.03	(< 20)
1,1-Dichloroethene	30	30.5	102	30	31.0	103	(71-131)	1.80	(< 20)
1,1-Dichloropropene	30	33.3	111	30	32.9	110	(79-125)	1.10	(< 20)
1,2,3-Trichlorobenzene	30	33.5	112	30	33.0	110	(69-129)	1.50	(< 20)
1,2,3-Trichloropropane	30	32.6	109	30	32.7	109	(73-122)	0.18	(< 20)
1,2,4-Trichlorobenzene	30	33.5	112	30	32.9	110	(69-130)	1.60	(< 20)
1,2,4-Trimethylbenzene	30	30.9	103	30	29.9	100	(79-124)	3.30	(< 20)
1,2-Dibromo-3-chloropropane	30	35.3	118	30	36.3	121	(62-128)	2.80	(< 20)
1,2-Dibromoethane	30	33.5	112	30	33.2	111	(77-121)	0.87	(< 20)
1,2-Dichlorobenzene	30	31.7	106	30	31.1	104	(80-119)	1.90	(< 20)
1,2-Dichloroethane	30	29.4	98	30	28.8	96	(73-128)	1.90	(< 20)
1,2-Dichloropropane	30	31.8	106	30	31.0	103	(78-122)	2.40	(< 20)
1,3,5-Trimethylbenzene	30	30.3	101	30	29.5	98	(75-124)	2.60	(< 20)
1,3-Dichlorobenzene	30	31.5	105	30	30.7	102	(80-119)	2.50	(< 20)
1,3-Dichloropropane	30	32.5	108	30	32.0	107	(80-119)	1.80	(< 20)
1,4-Dichlorobenzene	30	32.5	108	30	31.8	106	(79-118)	2.30	(< 20)
2,2-Dichloropropane	30	32.3	108	30	31.7	106	(60-139)	1.70	(< 20)
2-Butanone (MEK)	90	84.8	94	90	89.1	99	(56-143)	4.90	(< 20)
2-Chlorotoluene	30	32.1	107	30	31.2	104	(79-122)	3.10	(< 20)
2-Hexanone	90	88.7	99	90	91.1	101	(57-139)	2.70	(< 20)
4-Chlorotoluene	30	32.5	108	30	31.7	106	(78-122)	2.50	(< 20)
4-Isopropyltoluene	30	31.6	105	30	31.3	104	(77-127)	0.76	(< 20)
4-Methyl-2-pentanone (MIBK)	90	89.6	100	90	93.3	104	(67-130)	4.10	(< 20)
Benzene	30	31.8	106	30	31.6	105	(79-120)	0.50	(< 20)
Bromobenzene	30	31.6	105	30	30.8	103	(80-120)	2.30	(< 20)
Bromochloromethane	30	31.2	104	30	31.2	104	(78-123)	0.13	(< 20)
Bromodichloromethane	30	33.5	112	30	32.9	110	(79-125)	1.80	(< 20)
Bromoform	30	33.6	112	30	33.7	112	(66-130)	0.33	(< 20)
Bromomethane	30	25.8	86	30	27.9	93	(53-141)	7.60	(< 20)
Carbon disulfide	45	48.4	107	45	49.0	109	(64-133)	1.30	(< 20)

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Blank Spike ID: LCS for HBN 1168600 [VXX29649] Blank Spike Lab ID: 1355009 Date Analyzed: 09/26/2016 20:16 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29649] Spike Duplicate Lab ID: 1355010 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600021

Results by SW8260B

		Blank Spike	e (ug/L)	\$	Spike Duplic	ate (ug/L)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Carbon tetrachloride	30	34.2	114	30	34.5	115	(72-136)	1.00	(< 20)
Chlorobenzene	30	32.6	109	30	31.7	106	(82-118)	2.70	(< 20)
Chloroethane	30	31.1	104	30	30.9	103	(60-138)	0.68	(< 20)
Chloroform	30	30.4	101	30	29.8	99	(79-124)	2.10	(< 20)
Chloromethane	30	24.9	83	30	26.1	87	(50-139)	4.80	(< 20)
cis-1,2-Dichloroethene	30	31.8	106	30	31.4	105	(78-123)	1.20	(< 20)
cis-1,3-Dichloropropene	30	33.5	112	30	33.0	110	(75-124)	1.40	(< 20)
Dibromochloromethane	30	31.4	105	30	31.1	104	(74-126)	1.00	(< 20)
Dibromomethane	30	32.0	107	30	31.6	105	(79-123)	1.10	(< 20)
Dichlorodifluoromethane	30	27.7	92	30	28.3	94	(32-152)	2.10	(< 20)
Ethylbenzene	30	33.6	112	30	33.0	110	(79-121)	1.80	(< 20)
Freon-113	45	52.4	116	45	52.0	116	(70-136)	0.71	(< 20)
Hexachlorobutadiene	30	32.4	108	30	33.7	112	(66-134)	3.90	(< 20)
Isopropylbenzene (Cumene)	30	31.3	104	30	30.8	103	(72-131)	1.50	(< 20)
Methylene chloride	30	29.9	100	30	32.2	107	(74-124)	7.40	(< 20)
Methyl-t-butyl ether	45	51.1	114	45	51.2	114	(71-124)	0.23	(< 20)
Naphthalene	30	33.5	112	30	34.1	114	(61-128)	1.70	(< 20)
n-Butylbenzene	30	34.6	115	30	34.3	114	(75-128)	0.73	(< 20)
n-Propylbenzene	30	31.2	104	30	30.3	101	(76-126)	2.70	(< 20)
o-Xylene	30	34.3	114	30	33.1	110	(78-122)	3.60	(< 20)
P & M -Xylene	60	67.0	112	60	65.5	109	(80-121)	2.20	(< 20)
sec-Butylbenzene	30	31.8	106	30	31.2	104	(77-126)	1.90	(< 20)
Styrene	30	30.8	103	30	29.8	100	(78-123)	3.10	(< 20)
tert-Butylbenzene	30	31.8	106	30	31.2	104	(78-124)	2.10	(< 20)
Tetrachloroethene	30	33.1	110	30	32.7	109	(74-129)	1.20	(< 20)
Toluene	30	32.5	108	30	31.7	106	(80-121)	2.70	(< 20)
trans-1,2-Dichloroethene	30	32.2	107	30	32.6	109	(75-124)	1.40	(< 20)
trans-1,3-Dichloropropene	30	35.0	117	30	34.6	115	(73-127)	1.20	(< 20)
Trichloroethene	30	32.7	109	30	32.3	108	(79-123)	1.20	(< 20)
Trichlorofluoromethane	30	34.0	113	30	34.5	115	(65-141)	1.50	(< 20)
Vinyl acetate	30	31.7	106	30	33.3	111	(54-146)	5.00	(< 20)
Vinyl chloride	30	28.4	95	30	30.2	101	(58-137)	6.20	(< 20)
Xylenes (total)	90	101	113	90	98.6	110	(79-121)	2.70	(< 20)

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Blank Spike ID: LCS for HBN 1168600 [VXX29649] Blank Spike Lab ID: 1355009 Date Analyzed: 09/26/2016 20:16 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29649] Spike Duplicate Lab ID: 1355010 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600021

Results by SW8260B

		Blank Spil	ke (%)		Spike Dup	licate (%)			
Parameter	<u>Spike</u>	Result	Rec (%)	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	98.6	99	30	99.6	100	(81-118)	1.00	
4-Bromofluorobenzene (surr)	30	96.1	96	30	97	97	(85-114)	0.97	
Toluene-d8 (surr)	30	99.5	100	30	102	102	(89-112)	2.30	

Batch Information

Analytical Batch: VMS16224 Analytical Method: SW8260B Instrument: VSA Agilent GC/MS 7890B/5977A Analyst: TJT Prep Batch: VXX29649 Prep Method: SW5030B Prep Date/Time: 09/26/2016 06:00 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 10/10/2016 11:36:36AM

Method Blank				
Blank ID: MB for HBN 1744 Blank Lab ID: 1355231 QC for Samples: 1168600017	226 [VXX/29657]	Matri	x: Soil/Solid (dry	weight)
Results by SW8021B		·		
Parameter o-Xylene P & M -Xylene	<u>Results</u> 0.0125U 0.0250U	<u>LOQ/CL</u> 0.0250 0.0500	<u>DL</u> 0.00780 0.0150	<u>Units</u> mg/Kg mg/Kg
Surrogates 1,4-Difluorobenzene (surr)	79.6	72-119		%
3atch Information				
Analytical Batch: VFC1333 Analytical Method: SW802 Instrument: Agilent 7890 P Analyst: ST Analytical Date/Time: 9/28	35 1B 1D/FID /2016 6:18:00PM	Prep Ba Prep M Prep Da Prep Ini Prep Ex	atch: VXX29657 ethod: SW5035A ate/Time: 9/28/20 itial Wt./Vol.: 50 g ktract Vol: 25 mL	16 12:30:00AM

Print Date: 10/10/2016 11:36:38AM

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Blank Spike ID: LCS for HBN 1168600 [VXX29657] Blank Spike Lab ID: 1355232 Date Analyzed: 09/28/2016 16:43 Spike Duplicate ID: LCSD for HBN 1168600 [VXX29657] Spike Duplicate Lab ID: 1355233 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600017

Results by SW8021B Blank Spike (mg/Kg) Spike Duplicate (mg/Kg) Parameter <u>Spike</u> Result Rec (%) <u>Spike</u> Result Rec (%) <u>CL</u> <u>RPD (%)</u> RPD CL 1.25 o-Xylene 1.34 107 1.25 1.35 108 (75-125) (< 20) 0.97 P & M -Xylene 2.50 2.71 108 2.50 2.74 110 (80-125) 1.20 (< 20) Surrogates 1,4-Difluorobenzene (surr) 1.25 88.1 88 1.25 87.3 87 (72-119) 0.84 **Batch Information**

Analytical Batch: VFC13335 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST

Prep Batch: VXX29657 Prep Method: SW5035A Prep Date/Time: 09/28/2016 00:30 Spike Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL Dupe Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL

Print Date: 10/10/2016 11:36:40AM



Matrix Spike Summary

Original Sample ID: 1355559 MS Sample ID: 1355236 MS MSD Sample ID: 1355237 MSD Analysis Date: 09/28/2016 23:41 Analysis Date: 09/29/2016 0:00 Analysis Date: 09/29/2016 0:19 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600017

Results by SW8021B										
		Mat	rix Spike (r	ng/Kg)	Spike	Duplicate	(mg/Kg)			
<u>Parameter</u> o-Xvlene	<u>Sample</u> 0.0100J	<u>Spike</u> 0.851	<u>Result</u> 0.923	<u>Rec (%)</u> 107	<u>Spike</u> 0.851	<u>Result</u> 0.932	<u>Rec (%)</u> 108	<u>CL</u> 75-125	<u>RPD (%)</u> 0.95	<u>RPD CL</u> (< 20)
P & M -Xylene	0.0182J	1.70	1.92	112	1.70	1.94	113	80-125	1.10	(< 20)
Surrogates 1,4-Difluorobenzene (surr)		0.851	0.769	90	0.851	0.750	88	72-119	2.40	

Batch Information

Analytical Batch: VFC13335 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST Analytical Date/Time: 9/29/2016 12:00:01AM Prep Batch: VXX29657 Prep Method: AK101 Extraction (S) Prep Date/Time: 9/28/2016 12:30:00AM Prep Initial Wt./Vol.: 73.43g Prep Extract Vol: 25.00mL

Print Date: 10/10/2016 11:36:41AM



Method Blank

Blank ID: MB for HBN 1743440 [XXX/36351] Blank Lab ID: 1353365 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600003, 1168600004

Results by 8270D SIM LV (PAH)

Parameter	<u>Results</u>	LOQ/CL	DL	<u>Units</u>	
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L	
2-Methylnaphthalene	0.0152J	0.0500	0.0150	ug/L	
Acenaphthene	0.0250U	0.0500	0.0150	ug/L	
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L	
Anthracene	0.0250U	0.0500	0.0150	ug/L	
Benzo(a)Anthracene	0.0155J	0.0500	0.0150	ug/L	
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L	
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L	
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L	
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L	
Chrysene	0.0250U	0.0500	0.0150	ug/L	
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L	
Fluoranthene	0.0166J	0.0500	0.0150	ug/L	
Fluorene	0.0250U	0.0500	0.0150	ug/L	
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L	
Naphthalene	0.0500U	0.100	0.0310	ug/L	
Phenanthrene	0.0172J	0.0500	0.0150	ug/L	
Pyrene	0.0167J	0.0500	0.0150	ug/L	
Surrogates					
2-Fluorobiphenyl (surr)	82.8	53-106		%	
Terphenyl-d14 (surr)	90.2	58-132		%	

Batch Information

Analytical Batch: XMS9632 Analytical Method: 8270D SIM LV (PAH) Instrument: Agilent GC 7890B/5977A SWA Analyst: S.G Analytical Date/Time: 9/23/2016 5:48:00AM Prep Batch: XXX36351 Prep Method: SW3520C Prep Date/Time: 9/21/2016 8:46:09AM Prep Initial Wt./Vol.: 250 mL Prep Extract Vol: 1 mL

Print Date: 10/10/2016 11:36:42AM

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Blank Spike ID: LCS for HBN 1168600 [XXX36351] Blank Spike Lab ID: 1353366 Date Analyzed: 09/23/2016 06:10 Spike Duplicate ID: LCSD for HBN 1168600 [XXX36351] Spike Duplicate Lab ID: 1353367 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600003, 1168600004

Results by 8270D SIM LV (PAH)

	E	Blank Spike	(ug/L)		Spike Duplic	ate (ug/L)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
1-Methylnaphthalene	2	1.76	88	2	1.62	81	(41-115)	8.20	(< 20)
2-Methylnaphthalene	2	1.69	84	2	1.54	77	(39-114)	9.30	(< 20)
Acenaphthene	2	2.05	103	2	1.90	95	(48-114)	7.80	(< 20)
Acenaphthylene	2	1.76	88	2	1.61	81	(35-121)	8.80	(< 20)
Anthracene	2	1.78	89	2	1.64	82	(53-119)	8.50	(< 20)
Benzo(a)Anthracene	2	1.72	86	2	1.56	78	(59-120)	9.80	(< 20)
Benzo[a]pyrene	2	1.76	88	2	1.56	78	(53-120)	12.00	(< 20)
Benzo[b]Fluoranthene	2	1.65	83	2	1.49	75	(53-126)	10.00	(< 20)
Benzo[g,h,i]perylene	2	1.63	81	2	1.40	70	(44-128)	15.00	(< 20)
Benzo[k]fluoranthene	2	1.71	85	2	1.55	77	(54-125)	9.90	(< 20)
Chrysene	2	1.86	93	2	1.71	86	(57-120)	8.40	(< 20)
Dibenzo[a,h]anthracene	2	1.56	78	2	1.29	64	(44-131)	19.50	(< 20)
Fluoranthene	2	1.81	91	2	1.63	82	(58-120)	10.20	(< 20)
Fluorene	2	1.77	89	2	1.61	81	(50-118)	9.30	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.61	80	2	1.40	70	(48-130)	13.50	(< 20)
Naphthalene	2	1.71	86	2	1.58	79	(43-114)	7.90	(< 20)
Phenanthrene	2	1.75	88	2	1.60	80	(53-115)	9.10	(< 20)
Pyrene	2	1.90	95	2	1.72	86	(53-121)	9.50	(< 20)
Surrogates									
2-Fluorobiphenyl (surr)	2	91.3	91	2	84	84	(53-106)	8.40	
Terphenyl-d14 (surr)	2	94.3	94	2	87.2	87	(58-132)	7.80	

Batch Information

Analytical Batch: XMS9632 Analytical Method: 8270D SIM LV (PAH) Instrument: Agilent GC 7890B/5977A SWA Analyst: S.G Prep Batch: XXX36351 Prep Method: SW3520C Prep Date/Time: 09/21/2016 08:46 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

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Method Blank

Blank ID: MB for HBN 1743485 [XXX/36358] Blank Lab ID: 1353556 Matrix: Soil/Solid (dry weight)

QC for Samples:

1168600007, 1168600008, 1168600009, 1168600010, 1168600011, 1168600012, 1168600013, 1168600014, 1168600015, 1168600016

Results by AK102

Parameter Diesel Range Organics	<u>Results</u> 10.0U	<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> mg/Kg	
Surrogates 5a Androstane (surr)	93.6	60-120		%	
Batch Information					
Analytical Batch: XFC128 Analytical Method: AK102 Instrument: Agilent 7890E Analyst: NRO Analytical Date/Time: 9/22	66 9 R 2/2016 2:38:00AM	Prep Bai Prep Me Prep Da Prep Init Prep Ext	tch: XXX36358 thod: SW3550 te/Time: 9/21/2 ial Wt./Vol.: 30 tract Vol: 1 mL	3 IC 2016 4:10:19PM) g	

Print Date: 10/10/2016 11:36:45AM



Blank Spike Summary									
Blank Spike ID: LCS for HBN Blank Spike Lab ID: 1353557 Date Analyzed: 09/22/2016	I 1168600 7 02:49	XXX3635	8]	Spi [XX Spi Ma	ke Duplica (X36358] ke Duplica trix: Soil/S	ate ID: LCS ate Lab ID: Solid (dry w	SD for HBN 1 1353558 eight)	168600	
QC for Samples: 1168600 1168600	007, 116860 014, 116860	00008, 1168 00015, 1168	3600009, 116 3600016	8600010,	116860001	11, 1168600	012, 1168600	013,	
Results by AK102			_						
	B	lank Spike	(mg/Kg)	S	pike Duplic	ate (mg/Kg)			
Parameter	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Diesel Range Organics	167	151	91	167	149	90	(75-125)	1.20	(< 20)
Surrogates									
5a Androstane (surr)	3.33	96.7	97	3.33	93.4	93	(60-120)	3.40	
Batch Information									
Analytical Batch: XFC12866 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: NRO				Pre Pre Spil Dup	p Batch: X p Method: p Date/Tim ke Init Wt./\ be Init Wt./\	XX36358 SW3550C e: 09/21/20 /ol.: 167 mg /ol.: 167 mg	16 16:10 g/Kg Extract y/Kg Extract \	Vol: 1 mL /ol: 1 mL	

Print Date: 10/10/2016 11:36:47AM

Method Blank

Blank ID: MB for HBN 1743485 [XXX/36358] Blank Lab ID: 1353556 Matrix: Soil/Solid (dry weight)

QC for Samples:

1168600007, 1168600008, 1168600009, 1168600010, 1168600011, 1168600012, 1168600013, 1168600014, 1168600015, 1168600016

Results by AK103

Parameter Residual Range Organics	<u>Results</u> 10.0U		<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> mg/Kg	
Surrogates n-Triacontane-d62 (surr)	92.4	1	60-120		%	
Batch Information						
Analytical Batch: XFC12866 Analytical Method: AK103 Instrument: Agilent 7890B F Analyst: NRO Analytical Date/Time: 9/22/2	3 R 2016 2:38:00AM		Prep Batcl Prep Meth Prep Date Prep Initia Prep Extra	n: XXX36358 od: SW3550C /Time: 9/21/2016 I Wt./Vol.: 30 g nct Vol: 1 mL	4:10:19PM	

Print Date: 10/10/2016 11:36:48AM



Plank Sniko Summany											
Blank Spike Summary Blank Spike ID: LCS for HBN 1168600 [XXX36358] Blank Spike Lab ID: 1353557 Date Analyzed: 09/22/2016 02:49			8]	Spike Duplicate ID: LCSD for HBN 1168600 [XXX36358] Spike Duplicate Lab ID: 1353558 Matrix: Soil/Solid (dry weight)							
QC for Samples: 1168600 1168600	0007, 116860 0014, 116860	00008, 1168 00015, 1168	3600009, 116 3600016	8600010,	116860001	11, 11686000	012, 1168600	013,			
Results by AK103											
	E	Blank Spike	(mg/Kg)	S	pike Duplic	ate (mg/Kg)					
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL		
Residual Range Organics	167	160	96	167	155	93	(60-120)	3.10	(< 20)		
Surrogates											
n-Triacontane-d62 (surr)	3.33	98.1	98	3.33	94.5	95	(60-120)	3.80			
Batch Information											
Analyst: NRO				Spil	ke Init Wt.A	/ol.: 167 mg /ol.: 167 mg	/Kg Extract /Kg Extract \	Vol: 1 mL /ol: 1 mL			

Print Date: 10/10/2016 11:36:50AM

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Method Blank Blank ID: MB for HBN 1743536 [XXX/36360] Blank Lab ID: 1353644 QC for Samples: 1168600017, 1168600018, 1168600020		Matrix: Soil/Solid (dry weight)						
Results by AK102								
Parameter Diesel Range Organics	<u>Results</u> 10.0U	<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> mg/Kg				
Surrogates				5 5				
5a Androstane (surr)	99.5	60-120		%				
Batch Information								
Analytical Batch: XFC12874 Analytical Method: AK102 Instrument: Agilent 7890B F Analyst: CRA Analytical Date/Time: 9/22/2016 2:04:00PM		Prep Bato Prep Metl Prep Date Prep Initia Prep Extr	ch: XXX3636 hod: SW355 e/Time: 9/21/ al Wt./Vol.: 3 act Vol: 1 ml	0 DC '2016 8:15:13PM 0 g -				



Blank Spike ID: LCS for HBN 1168600 [XXX36360] Blank Spike Lab ID: 1353645 Date Analyzed: 09/22/2016 14:14 Spike Duplicate ID: LCSD for HBN 1168600 [XXX36360] Spike Duplicate Lab ID: 1353646 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600017, 1168600018, 1168600020

Results by AK102			_						
	E	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)				
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Diesel Range Organics	167	151	91	167	144	86	(75-125)	4.90	(< 20)
Surrogates									
5a Androstane (surr)	3.33	103	103	3.33	93.8	94	(60-120)	9.50	
Batch Information									
Analytical Batch: XFC12874 Analytical Method: AK102 Instrument: Agilent 7890B F Analyst: CRA	Prep Batch: XXX36360 Prep Method: SW3550C Prep Date/Time: 09/21/2016 20:15 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL								

Print Date: 10/10/2016 11:36:53AM
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Blank ID: MB for HBN 1743 Blank Lab ID: 1353644 QC for Samples: 1168600017, 1168600018, 11	536 [XXX/36360] 68600020	Matrix	:: Soil/Solid (d	ry weight)
Results by AK103				
Parameter Residual Range Organics	<u>Results</u> 6.77 I	<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> ma/Ka
Surrogates	0.770	20.0	0.20	iiig/ixg
n-Triacontane-d62 (surr)	95.8	60-120		%
atch Information				
Analytical Batch: XFC1287	74	Prep Ba	tch: XXX36360)
Analytical Method: AK103 Instrument: Agilent 7890B	F	Prep Me Prep Da	thod: SW3550 te/Time: 9/21/2	2016 8:15:13PM
Analyst: CRA		Prep Init	ial Wt./Vol.: 30) g
Analytical Date/Time: 9/22	/2016 2:04:00PM	Prep Ext	tract Vol: 1 mL	

Print Date: 10/10/2016 11:36:54AM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [XXX36360] Blank Spike Lab ID: 1353645 Date Analyzed: 09/22/2016 14:14 Spike Duplicate ID: LCSD for HBN 1168600 [XXX36360] Spike Duplicate Lab ID: 1353646 Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600017, 1168600018, 1168600020

Results by AK103			_						
	E	Blank Spike	(mg/Kg)	S	pike Duplic	ate (mg/Kg)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Residual Range Organics	167	141	85	167	135	81	(60-120)	4.90	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	3.33	95.6	96	3.33	93.2	93	(60-120)	2.50	
Batch Information									
Analytical Batch: XFC12874 Analytical Method: AK103 Instrument: Agilent 7890B F				Pre Pre Pre	p Batch: X p Method: p Date/Tim	XX36360 SW3550C e: 09/21/201	16 20:15		
Analyst: CRA				Spi Dup	ke Init Wt./\ be Init Wt./\	/ol.: 167 mg /ol.: 167 mg	g/Kg Extract /Kg Extract	Vol: 1 mL Vol: 1 mL	

Print Date: 10/10/2016 11:36:55AM



Method Blank

Blank ID: MB for HBN 1743687 [XXX/36371] Blank Lab ID: 1353921

QC for Samples: 1168600017, 1168600019

Results by 8270D SIM (PAH)

Parameter	<u>Results</u>	LOQ/CL	DL	<u>Units</u>	
1-Methylnaphthalene	0.00250U	0.00500	0.00150	mg/Kg	
2-Methylnaphthalene	0.00250U	0.00500	0.00150	mg/Kg	
Acenaphthene	0.00250U	0.00500	0.00150	mg/Kg	
Acenaphthylene	0.00250U	0.00500	0.00150	mg/Kg	
Anthracene	0.00250U	0.00500	0.00150	mg/Kg	
Benzo(a)Anthracene	0.00250U	0.00500	0.00150	mg/Kg	
Benzo[a]pyrene	0.00250U	0.00500	0.00150	mg/Kg	
Benzo[b]Fluoranthene	0.00250U	0.00500	0.00150	mg/Kg	
Benzo[g,h,i]perylene	0.00250U	0.00500	0.00150	mg/Kg	
Benzo[k]fluoranthene	0.00250U	0.00500	0.00150	mg/Kg	
Chrysene	0.00250U	0.00500	0.00150	mg/Kg	
Dibenzo[a,h]anthracene	0.00250U	0.00500	0.00150	mg/Kg	
Fluoranthene	0.00250U	0.00500	0.00150	mg/Kg	
Fluorene	0.00250U	0.00500	0.00150	mg/Kg	
Indeno[1,2,3-c,d] pyrene	0.00250U	0.00500	0.00150	mg/Kg	
Naphthalene	0.00250U	0.00500	0.00150	mg/Kg	
Phenanthrene	0.00250U	0.00500	0.00150	mg/Kg	
Pyrene	0.00250U	0.00500	0.00150	mg/Kg	
Surrogates					
2-Fluorobiphenyl (surr)	107	46-115		%	
Terphenyl-d14 (surr)	101	58-133		%	

Batch Information

Analytical Batch: XMS9669 Analytical Method: 8270D SIM (PAH) Instrument: SVA Agilent 780/5975 GC/MS Analyst: S.G Analytical Date/Time: 10/6/2016 1:00:00AM Prep Batch: XXX36371 Prep Method: SW3550C Prep Date/Time: 9/22/2016 9:05:40PM Prep Initial Wt./Vol.: 22.5 g Prep Extract Vol: 1 mL

Matrix: Soil/Solid (dry weight)

Print Date: 10/10/2016 11:36:57AM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [XXX36371] Blank Spike Lab ID: 1353922 Date Analyzed: 10/06/2016 01:20

Matrix: Soil/Solid (dry weight)

QC for Samples: 1168600017, 1168600019

Results by 8270D SIM (PAH)

	B	Blank Spike	(mg/Kg)	
Parameter	Spike	Result	<u>Rec (%)</u>	
1-Methylnaphthalene	0.0222	0.0197	89	
2-Methylnaphthalene	0.0222	0.0191	86	
Acenaphthene	0.0222	0.0206	93	
Acenaphthylene	0.0222	0.0191	86	
Anthracene	0.0222	0.0202	91	
Benzo(a)Anthracene	0.0222	0.0199	90	
Benzo[a]pyrene	0.0222	0.0198	89	
Benzo[b]Fluoranthene	0.0222	0.0204	92	
Benzo[g,h,i]perylene	0.0222	0.0215	97	
Benzo[k]fluoranthene	0.0222	0.0206	93	
Chrysene	0.0222	0.0219	99	
Dibenzo[a,h]anthracene	0.0222	0.0215	97	
Fluoranthene	0.0222	0.0199	90	
Fluorene	0.0222	0.0204	92	
Indeno[1,2,3-c,d] pyrene	0.0222	0.0211	95	
Naphthalene	0.0222	0.0178	80	
Phenanthrene	0.0222	0.0204	92	(4
Pyrene	0.0222	0.0218	98	(55
Surrogates				
2-Fluorobiphenyl (surr)	0.0222	106	106	(46-1
Terphenyl-d14 (surr)	0.0222	100	100	(58-13

Batch Information

Analytical Batch: XMS9669 Analytical Method: 8270D SIM (PAH) Instrument: SVA Agilent 780/5975 GC/MS Analyst: S.G Prep Batch: XXX36371 Prep Method: SW3550C Prep Date/Time: 09/22/2016 21:05 Spike Init Wt./Vol.: 0.0222 mg/Kg Extract Vol: 1 mL Dupe Init Wt./Vol.: Extract Vol:

Print Date: 10/10/2016 11:36:58AM

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Matrix Spike Summary

Original Sample ID: 1165468002 MS Sample ID: 1353923 MS MSD Sample ID: 1353924 MSD

QC for Samples: 1168600017, 1168600019

Results by 8270D SIM (PAH)

		Matr	ix Spike (n	ng/Kg)	Spike	Duplicate	(mg/Kg)			
Parameter	Sample	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	Rec (%)	CL	<u>RPD (%)</u>	RPD CL
1-Methylnaphthalene	0.00256U	0.0231	0.0204	88	0.0228	0.0207	91	43-111	1.40	(< 20)
2-Methylnaphthalene	0.00256U	0.0231	0.0201	87	0.0228	0.0199	87	39-114	1.40	(< 20)
Acenaphthene	0.00256U	0.0231	0.0217	94	0.0228	0.0214	94	44-111	1.50	(< 20)
Acenaphthylene	0.00256U	0.0231	0.0199	86	0.0228	0.0204	89	39-116	2.20	(< 20)
Anthracene	0.00256U	0.0231	0.0208	90	0.0228	0.0207	91	50-114	0.57	(< 20)
Benzo(a)Anthracene	0.00256U	0.0231	0.0205	89	0.0228	0.0201	88	54-122	2.30	(< 20)
Benzo[a]pyrene	0.00256U	0.0231	0.0185	80	0.0228	0.0183	81	50-125	1.10	(< 20)
Benzo[b]Fluoranthene	0.00256U	0.0231	0.0193	83	0.0228	0.0195	85	53-128	0.78	(< 20)
Benzo[g,h,i]perylene	0.00256U	0.0231	0.0129	56	0.0228	0.0139	61	49-127	6.90	(< 20)
Benzo[k]fluoranthene	0.00256U	0.0231	0.0199	86	0.0228	0.0197	86	56-123	1.20	(< 20)
Chrysene	0.00256U	0.0231	0.0223	96	0.0228	0.0220	96	57-118	1.60	(< 20)
Dibenzo[a,h]anthracene	0.00256U	0.0231	0.0153	66	0.0228	0.0159	70	50-129	3.80	(< 20)
Fluoranthene	0.00256U	0.0231	0.0209	91	0.0228	0.0210	92	55-119	0.34	(< 20)
Fluorene	0.00256U	0.0231	0.0217	93	0.0228	0.0215	94	47-114	0.93	(< 20)
Indeno[1,2,3-c,d] pyrene	0.00256U	0.0231	0.0142	61	0.0228	0.0150	66	49-130	5.10	(< 20)
Naphthalene	0.00256U	0.0231	0.0181	78	0.0228	0.0190	83	38-111	4.90	(< 20)
Phenanthrene	0.00256U	0.0231	0.0210	91	0.0228	0.0215	94	49-113	1.90	(< 20)
Pyrene	0.00256U	0.0231	0.0226	98	0.0228	0.0225	99	55-117	0.07	(< 20)
Surrogates										
2-Fluorobiphenyl (surr)		0.0231	0.0250	108	0.0228	0.0260	114	46-115	4.00	
Terphenyl-d14 (surr)		0.0231	0.0244	105	0.0228	0.0248	109	58-133	1.60	

Batch Information

Analytical Batch: XMS9669 Analytical Method: 8270D SIM (PAH) Instrument: SVA Agilent 780/5975 GC/MS Analyst: S.G Analytical Date/Time: 10/6/2016 5:28:00AM Prep Batch: XXX36371 Prep Method: Sonication Extraction Soil 8270 PAH SIM Prep Date/Time: 9/22/2016 9:05:40PM Prep Initial Wt./Vol.: 22.50g Prep Extract Vol: 1.00mL

Analysis Date: 10/06/2016 5:08

Analysis Date: 10/06/2016 5:28

Analysis Date: 10/06/2016 5:49 Matrix: Soil/Solid (dry weight)

Print Date: 10/10/2016 11:37:00AM

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Method Blank					
Blank ID: MB for HBN 174 Blank Lab ID: 1354713	4113 [XXX/36396]	Matrix	: Water (Surfa	ce, Eff., Ground)	
QC for Samples: 1168600001, 1168600002, 1	168600003, 1168600004, 116	8600005			
Results by AK102					
Parameter Diesel Range Organics	<u>Results</u> 0.299J	<u>LOQ/CL</u> 0.600	<u>DL</u> 0.180	<u>Units</u> mg/L	
Surrogates 5a Androstane (surr)	94.8	60-120		%	
Batch Information					
Analytical Batch: XFC128 Analytical Method: AK103 Instrument: Agilent 78908	388 2 B R	Prep Bat Prep Me Prep Da Prep Init	tch: XXX36396 thod: SW35200 te/Time: 9/27/2 ial Wt./Vol.: 250	C 016 9:43:04AM) mL	

Print Date: 10/10/2016 11:37:00AM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [XXX36396] Blank Spike Lab ID: 1354714 Date Analyzed: 09/29/2016 14:45 Spike Duplicate ID: LCSD for HBN 1168600 [XXX36396] Spike Duplicate Lab ID: 1354715 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600001, 1168600002, 1168600003, 1168600004, 1168600005

Blank Spike (mg/L)Spike Duplicate (mg/L)arameterSpikeResultRec (%)SpikeResultRec (%)CLRPD (%)RPD CLesel Range Organics2019.5982020.4102(75-125)4.30(< 20)rrogatesa Androstane (surr)0.41131130.4118118(60-120)4.80atch InformationAnalytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRAPrep Batch: XXX36396 Prep Date/Time: 09/27/2016 09:43 Spike Init Wt./vol.: 20 mg/LPrep Satch: 1 mL Dupe Init Wt./vol.: 20 mg/LExtract Vol: 1 mL	Results by AK102											
arameterSpikeResultRec (%)SpikeResultRec (%)CLRPD (%)RPD CLlesel Range Organics2019.5982020.4102(75-125)4.30(< 20)rrogatesa Androstane (surr)0.41131130.4118118(60-120)4.80atch InformationAnalytical Batch: XFC12888Analytical Method:AK102Instrument:Agilent 7890B RAnalyst:CRA	h		Blank Spike	e (mg/L)	S	pike Dupli	cate (mg/L)					
esel Range Organics 20 19.5 98 20 20.4 102 (75-125) 4.30 (< 20) rrogates a Androstane (surr) 0.4 113 113 0.4 118 118 (60-120) 4.80 atch Information Analytical Batch: XFC12888 Analytical Method: AK102 Prep Batch: XXX36396 Prep Method: SW3520C Prep Method: SW3520C Instrument: Agilent 7890B R Analyst: CRA Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL	<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL		
Androstane (surr) 0.4 113 113 0.4 118 118 (60-120) 4.80 atch Information Analytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRA	ParameterSpikeDiesel Range Organics20Surrogates5a Androstane (surr)0.4Batch Information1	19.5	98	20	20.4	102	(75-125)	4.30	(< 20)			
a Androstane (surr) 0.4 113 113 0.4 118 118 (60-120) 4.80 atch Information Analytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRA Prep Batch: XXX36396 Prep Method: SW3520C Prep Date/Time: 09/27/2016 09:43 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL Extract Vol: 1 mL	urrogates											
atch Information Analytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRA Prep Date/Time: 09/27/2016 09:43 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL Dupe Init Wt./Vol.: 20 mg/L	5a Androstane (surr)	0.4	113	113	0.4	118	118	(60-120)	4.80			
Analytical Batch:XFC12888Prep Batch:XXX36396Analytical Method:AK102Prep Method:SW3520CInstrument:Agilent 7890B RPrep Date/Time:09/27/201609:43Analyst:CRASpike Init Wt./Vol.:20 mg/LExtract Vol:1 mLDupe Init Wt./Vol.:20 mg/LExtract Vol:1 mL	Batch Information											
	5a Androstane (surr) 0.4 113 113 Batch Information Analytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRA	Prep Batch: XXX36396 Prep Method: SW3520C Prep Date/Time: 09/27/2016 09:43 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL										
5a Androstane (surr)0.41131130.4118118(60-120)4.80Batch InformationAnalytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRAPrep Batch: XXX36396 Prep Date/Time: 09/27/2016 09:43 Spike Init Wt./Vol.: 20 mg/LPrextract Vol: 1 mL Dupe Init Wt./Vol.: 20 mg/LExtract Vol: 1 mL												
	Batch Information Analytical Batch: XFC12888 Analytical Method: AK102 Instrument: Agilent 7890B R Analyst: CRA											

Print Date: 10/10/2016 11:37:01AM

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Method Blank				
Blank ID: MB for HBN 1744 Blank Lab ID: 1354713	113 [XXX/36396]	Matrix	k: Water (Surfa	ce, Eff., Ground)
QC for Samples: 1168600001, 1168600002, 11	68600003, 1168600004, 116	8600005		
Results by AK103				
Parameter	<u>Results</u>	LOQ/CL	<u>DL</u>	<u>Units</u>
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n-Triacontane-d62 (surr)	92.9	60-120		%
Batch Information				
Analytical Batch: XFC1288	38	Prep Ba	tch: XXX36396	
Analytical Method: AK103	_	Prep Me	thod: SW35200	;
	R	Prep Da	te/Time: 9/27/20	016 9:43:04AM
Instrument: Agilent 7890B		Dron Init	ial \//t /\/al · 250	201



Blank Spike Summary

Blank Spike ID: LCS for HBN 1168600 [XXX36396] Blank Spike Lab ID: 1354714 Date Analyzed: 09/29/2016 14:45 Spike Duplicate ID: LCSD for HBN 1168600 [XXX36396] Spike Duplicate Lab ID: 1354715 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1168600001, 1168600002, 1168600003, 1168600004, 1168600005

		Blank Spike	e (mg/L)	5	pike Dupli	cate (mg/L)			
<u>arameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	<u>RPD C</u>
esidual Range Organics	20	19.5	98	20	20.2	101	(60-120)	3.30	(< 20)
rrogates									
-Triacontane-d62 (surr)	0.4	95	95	0.4	106	106	(60-120)	10.90	
atch Information									
Analytical Batch: XFC12888				Pre	o Batch: X	XX36396			
Analytical Method: AK103				Pre	o Method:	SW3520C			
Instrument: Agilent 7890B R				Pre	Date/IIm	e: 09/27/201 /ol: 20 ma/l	6 09:43	l·1 ml	
Analyst. CNA				Duc	e Init Wt /\	/ol.: 20 mg/l	Extract Vol	. in∟ . 1 ml	

Print Date: 10/10/2016 11:37:05AM

						С -	ot				URKS/											rements:				: (Circle)	ABSENT	ceipt Form)	
onwide	Maryland	New York	Indiana Kentucky	IS.COM			T Bage				REMA											rerable Requi		ns:		Custody Seal	BROKEN	ed Sample Re	1F,1B
ocations Natio		el sey	Carolina Virnina	www.us.sc	ut.																	Data Deliv		ial Instructio	MIC NIC	Chaimof	INTACT	(See attache	ANC
	Alaska New 1		North (West V		be filled o	f analysis																7 Yes		and/or Spec	MMLC	4		eipt Form)	-conditions
					5 must t	e onset o	reservative															DOD Project		around Time	- 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2		Ambient []	Sample Kec	muterms-and
					ctions 1 -	y delay th	Ē	2. H(C)	,	 	201								,			Section 4	Cooler ID:	equested Turr	5 L L L	emp Blank °C	or	See attached	p://www.sgs.ce
0)				ctions: Se	ssions ma	(1.0) (1.0) (1.1) (1.1)	He C		ן צבר אברבא	1040 1049											<u> </u>	-	-cy-PUR	<u> - 1654</u>	<u> </u>			Ŧ
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						ACO'	HONE NO:	ROJECT/ NSID/ ERMIT#:	-MAIL: V¿J©	iuote#: .o.#:	DATE mm/dd/	12/120)/10-1/16	09/15	09/151	09/15/1	1/51/120) 09/16/) 09/15/	09/16	04/10	Date	1/4/1/2			brb	Pate 9/20		9518 Tel: (\$ 28405 Tel:
			L		ł	X	ē.		ш	0 4	NTIFICATION	, (9-15-1l	6-11-16	<i>¶-51-6)</i> °	SLO	-15-16)	~	6(36.0'	,512,0	6(37.0)	015 0	\langle		-A					horage, AK 9 Imington, NC
C						T GELOP	WEBR	Stree F	cheu!	~ (s)	SAMPLE IDEI	1/02-1-5	-6-2016	102-2-8	3-1004A	ACI (9	3-1003	107-7-8	107-5-501	1-1-20/	107-0-	K.E.		y: (2) 7 - 7 - 16	(3) (3)		y: (4)		er Drive Ancl ess Drive Wil
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۱	CONTACT:	PH	ONE NO:		/	Sectio	on 3				Preserva	tive			baged of	di .
noita	PROJECT NAME:		SID/ SID/ SMIT#:			# U			-							
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	INVOICE TO:		IOTE #:). #:			∢ – z	GRAB Multi	71.8/	-H-							
]	RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	: ш е о	Incre- mental Soits	029							REMARKS/	
	(11)A-B	B-1-2016 (47.0')	04/14/16	13:35	5011	Ц	E L	$\left \right\rangle$							2	
	(a) A-B	D-2-2016 (6.0')	0/14/10	15:25	2012	Ц	P	$\left \right\rangle$								
٢	(J) A-B	B-2-2016 (36.0')	09/14/16	16:50	SUL	R	P	$\overline{\}$								
uoi	(14)4-B	B-2-2016 (47,5')	04/14/160	18:00	5012	Ц	B									
592	9-4-61	8-2-2016(49.5'	09/14/16	18:10	2/0S	Ц	S.	. \ \								
<u> </u>	(16)4-B	0-3-2016 (33.0)	04/15/16	12:40	2017	Ц	ľ,	$\overline{)}$								
	1-4-C	B-4-2016 (11.0')	09/15/16	13:20	SULL	h	P.	$\overline{)}$	$\frac{1}{2}$							
	19.4-B	B-4-2016 (35,0')	07/15//16	14:40	7/03	Ц	P	$\overline{)}$							(
	(1) H	6-1001	09/15/16	13:50	2011-	~	P		\setminus				-		(1-7(1e)	
	30/A-K	B-1002	09/15/16	16:50	2/105	Ц	P	$\frac{1}{1}$							AJA	
	Relinquisher	d By: (1)	Date	Time	Received B)		5		Se	ction 4	a dod	roject? Yes (I	d (ov	ata Delive	erable Requirement	ŝ
		MCC	c/10/10	0.00/	Crue !!	Blan	Þ		ů	oler ID:		, ,)			
y I	Rélinquíshec	(By: (2)	Date	Time	Received By			9-19	// Requ	lested T	urnaround	Time and/or :	Special In	Istruction	s:	
noitaa	Relinquished	K-L-KC By: (3)	H/H/L Date	Time	Received Bj	2	2	102	ন	GH,	hh.	-MSM-	565-	2010	0	
9 e 119		<u> </u>	019/6	ALL I	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				Tem	p Blank	ې ټ	5.4		hatmof C	ustody Seal: (Circle	(i)
01123	Refinquished	rBy: (4)	Date Q/ J//L	Tilke Dd 'S'	Received Fo	r Laborato	ory By: L	4	!		or Ambie	nt []		VTACT	BROKEN ABSEN	Ę
_	[] 200 W. P	otter Drive Anchorage, AK 99:	518 Tel: (907)	562-2343 Fa	x: (907) 561-5	301			L (Si http://	se attact /www.sg:	ed Samples.com/term	e Receipt Fon s-and-conditio	ш) (See	attached	I Sample Receipt Fo	E
	[] 5500 BU	siness Drive Wilmington, NC 2	28405 Tel: (91	0) 350-1903 F	ax: (910) 350	-1557										

F083-Kit_Request_and_COC_Templates-Blank Revised 2013-03-24



FAIRBANKS SAMPLE RECEIPT FORM

Note: This form is to be completed by Fairbanks Receiving Staff for all samples

1W 9/19/14

Review Criteria:	Co	nditio	on;	Comments/Actions Taken
Were custody seals intact? Note # & location, if applicable.	Yes	No	(NA)	Exemption permitted if sampler hand
COC accompanied samples?	Yes	No	Ň/A	carries/delivers.
Temperature blank compliant* (i.e., 0-6°C)	Yes	No	/	DExemption permitted if chilled &
If >6°C, were samples collected <8 hours ago?	Yes	No	NA	collected <8hrs ago
If <0°C, were all sample containers ice free?	Yes	No	N/A)	
Cooler ID: $@$ 3.4 w/Therm. ID: $+1$				
Cooler ID:@W/Therm. ID:				
Cooler ID: @ W/Therm. ID:				
Cooler ID:@W/Therm. ID:				
Cooler ID:W/Internit. ID:				
documented in lieu of the temperature blank and "COOLER TEMP" will be noted to				Note: Identify containers received at
the right. In cases where neither a temp blank nor cooler temp can be obtained, note				non-compliant temperature. Use form
ambient () or chilled (). Please check one.				FS-0029 if more space is needed.
Delivery Method: Client (hand carried) Other:	Tracl	king/A	\B#:	
	Orse	e atta	ched	
)r N/	R	
\rightarrow For samples received with payment, note amount (\$) and where \rightarrow	ether cash /	checl	c/CC(cir	cle one) was received.
Were samples in good condition (no leaks/cracks/breakage)?	(Yes	No	N/A	Note: some samples are sent to
Packing material used (specify all that apply): Bubble Wrap				Anchorage without inspection by SGS Egirbanks personnel
Separate plastic bags Vermiculite Other:				ranvanks personnel.
Was The Dischart Was a Line as low with some land		NT-	NT/A	
Were Trip blanks (i.e., VOAs, LL-Hg) in cooler with samples?	168	INO No	IN/A	•
For RUSH/SHUR Hold Time, were COC/Bollies Hagged	All All	INO No	IN/A NI/A	
accordingly—was Rush/Short HT email sent, if applicable?	168	INO	IN/A	
Additional notes (if applicable):				
PAH'S JUL 9/22/16.				
Press, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011, 2011,				
Profile #: 338 9 28				
Note to Client: any "no" circled above indicates non-compliance	with standard	l proced	lures and ma	y impact data quality.



	1168600		1 1 6 8 6 0 0						
Review Criteria	Y/I	N (yes/no)		Exc	eptions N	loted be	low		
				exemption perr	nitted if sam	pler hand	carrie	es/delivers.	
Were Custody Seals intact? Note # 8	& location	Y			1-F, 1-B				
COC accompanied	samples?	Y							
**exemption perm	litted if ch	illed & co	lected <8	hrs ago or chiling no	ot required (i	i.e., waste	, oil)	The same UD.	242
			Cooler ID:	1	س ھ	0.4	°C	Therm ID:	242
Temperature blank compliant* (i.e., 0-6 °C	after CE)?		ooler ID:		س ۵		°C	Therm ID:	
			Cooler ID:		@		°C	Therm ID:	
			Cooler ID:		@		°C	Therm ID:	
*If >6°C, were samples collected <8 ho	urs ago?								
If <0°C, were sample containers	ice free?								
If samples received <u>without</u> a temperature blank, the "cooler tempera be documented in lieu of the temperature blank & " COOLER TEMP " wi noted to the right. In cases where neither a temp blank nor cooler ten obtained, note "ambient" or "chilled".	ture" will ill be np can be								
Note: Identify containers received at non-compliant temperature . Us FS-0029 if more space is needed.	e form								
		No	te: Refer	to form F-083 "Sam	ple Guide" fo	or hold tin	nes.		
Were samples received within h	old time?	Y							
Do samples match COC** (i.e.,sample IDs,dates/times co	ollected)?	Y							
**Note: If times differ <1hr, record details & login	per COC.								
Were analyses requested unam	ibiguous?	Y							
				***Exemption	permitted for	r metals (e	e.g,20	0.8/6020A).	
Were proper containers (type/mass/volume/preservative*	**)used?	Υ							
IF APPLICABLE									
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with	samples?	Y							
Were all VOA vials free of headspace (i.e., bubbles	≤ 6mm)?	Y							
Were all soil VOAs field extracted with Me	OH+BFB?	Ŷ							
Note to Client: Any "no" answer above indicate	s non-con	npliance w	ith stand	ard procedures and	may impact	data qual	ity.		
Addii	tional no	otes (if a	pplicab	le):					
Water Trip Blanks (Sample 21) and PAHs (Samples 3F & 4F) wer	e receve	d with lin	ited voli	ume.					



Sample Containers and Preservatives

<u>Container Id</u>	Preservative	<u>Container</u> <u>Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container</u> <u>Condition</u>
1168600001-A	HCL to $pH < 2$	ОК	1168600011-B	Methanol field pres. 4 C	ОК
1168600001-B	HCL to pH < 2	ОК	1168600012-A	No Preservative Required	ОК
1168600001-C	HCL to pH < 2	ОК	1168600012-В	Methanol field pres. 4 C	ОК
1168600001-D	HCL to pH < 2	ОК	1168600013-A	No Preservative Required	ОК
1168600001-E	HCL to pH < 2	ОК	1168600013-B	Methanol field pres. 4 C	ОК
1168600002-A	HCL to pH < 2	OK	1168600014-A	No Preservative Required	ОК
1168600002-B	HCL to pH < 2	OK	1168600014-B	Methanol field pres. 4 C	ОК
1168600002-C	HCL to pH < 2	OK	1168600015-A	No Preservative Required	ОК
1168600002-D	HCL to pH < 2	OK	1168600015-B	Methanol field pres. 4 C	ОК
1168600002-E	HCL to pH < 2	OK	1168600016-A	No Preservative Required	ОК
1168600003-A	HCL to pH < 2	OK	1168600016-B	Methanol field pres. 4 C	ОК
1168600003-B	HCL to $pH < 2$	OK	1168600017-A	No Preservative Required	ОК
1168600003-C	HCL to $pH < 2$	OK	1168600017-B	No Preservative Required	ОК
1168600003-D	HCL to $pH < 2$	OK	1168600017-C	Methanol field pres. 4 C	ОК
1168600003-E	HCL to $pH < 2$	ОК	1168600018-A	No Preservative Required	ОК
1168600003-F	No Preservative Required	OK	1168600018-B	Methanol field pres. 4 C	ОК
1168600004-A	HCL to $pH < 2$	ОК	1168600019-A	No Preservative Required	ОК
1168600004-B	HCL to $pH < 2$	OK	1168600020-A	No Preservative Required	ОК
1168600004-C	HCL to $pH < 2$	ОК	1168600020-В	Methanol field pres. 4 C	ОК
1168600004-D	HCL to $pH < 2$	OK	1168600021-A	HCL to $pH < 2$	ОК
1168600004-E	HCL to $pH < 2$	ОК	1168600021-B	HCL to $pH < 2$	ОК
1168600004-F	No Preservative Required	ОК	1168600021-C	HCL to $pH < 2$	ОК
1168600005-A	HCL to $pH < 2$	ОК	1168600021-D	HCL to $pH < 2$	ОК
1168600005-B	HCL to pH < 2	ОК	1168600022-A	Methanol field pres. 4 C	ОК
1168600005-C	HCL to $pH < 2$	OK			
1168600005-D	HCL to pH < 2	OK			
1168600005-E	HCL to $pH < 2$	OK			
1168600005-F	HCL to pH < 2	OK			
1168600005-G	HCL to $pH < 2$	OK			
1168600005-H	HCL to $pH < 2$	OK			
1168600006-A	HCL to $pH < 2$	OK			
1168600006-В	HCL to $pH < 2$	OK			
1168600006-C	HCL to $pH < 2$	OK			
1168600007-A	No Preservative Required	OK			
1168600007-В	Methanol field pres. 4 C	OK			
1168600008-A	No Preservative Required	OK			
1168600008-B	Methanol field pres. 4 C	OK			
1168600009-A	No Preservative Required	OK			
1168600009-B	Methanol field pres. 4 C	ОК			
1168600010-A	No Preservative Required	ОК			
1168600010-В	Methanol field pres. 4 C	ОК			
1168600011-A	No Preservative Required	OK			

9/20/2016

Container Id

<u>Preservative</u>

Container Condition Container Id

Preservative

Container Condition

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM- The container was received damaged.

FR- The container was received frozen and not usable for Bacteria or BOD analyses.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

Laboratory Data Review Checklist

C I dam Wyborny					
Completed by: Adam wyborny					
Title:Environmental Engineering StaffDate:October 17, 2016					
CS Report Name: Interior Texaco Report Date: October 10, 2016					
Consultant Firm: Shannon & Wilson, Inc.					
Laboratory Name: SGS North America, Inc. Laboratory Report Number: 1168600					
ADEC File Number: 120.26.001 ADEC RecKey Number:					
 Laboratory Laboratory					
 b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved? Yes No XNA (Please explain.) Comments: 					
Analyses were performed by SGS North America, Inc. in Anchorage, Alaska.					
 2. <u>Chain of Custody (COC)</u> a. COC information completed, signed, and dated (including released/received by)? Yes No NA (Please explain.) Comments: 					
b. Correct analyses requested? Xes No NA (Please explain.) Comments:					
 3. Laboratory Sample Receipt Documentation a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)? ∑Yes □ No □NA (Please explain.) Comments: Temperature blanks and/or the cooler were measured within the acceptable temperature range of 0 °C to 6 °C upon receipt at the SGS Fairbanks receiving office and Anchorage laboratory. This range has been approved by ADEC. 					

b.	Sample preservation acceptable – acidified waters, Me	ethanol preserved VOC soil (GRO, BTEX,
	\square Yes \square No \square NA (Please explain.)	Comments:
1	Methanol and HCl were used as field preservatives when	re required by method criteria.
c.	Sample condition documented – broken, leaking (Meth Yes No NA (Please explain.)	hanol), zero headspace (VOC vials)? Comments:
,	Samples were documented as received in good condition	1.
d.	If there were any discrepancies, were they documented containers/preservation, sample temperature outside of samples, etc.? Yes No NA (Please explain.)	d? For example, incorrect sample f acceptable range, insufficient or missing Comments:
r T	The laboratory noted that the water trip blank (sample 2) eccived with limited volume. Sufficient volume was ava the analytical results are not considered affected by these	1) and PAHs for samples 3F and 4F were allable to perform the requested analyses. e sample handling anomalies
e.	Data quality or usability affected? (Please explain.)	Comments:
]	The data quality and usability were not affected.	
Case 1 a.	<u>Narrative</u> Present and understandable? ⊠Yes □ No □NA (Please explain.)	Comments:
b.	Discrepancies, errors or QC failures identified by the la	ab?
	∐Yes ∐ No ∐NA (Please explain.)	Comments:
4 d	The case narrative notes that project samples B-5-2016(2 -2016(11.0'), and B-1002 have surrogate recoveries for o not meet QC criteria due to matrix interference for GF	27.5'), B-2-2016(6.0'), B-2-2016(47.5'), B- 4-bromofluorobenzene (biased high) that RO analysis.
ro fo	The case narrative notes that project samples B-4-2016(1) ecoveries for 2-fluorobiphenyl (biased high) that do not or PAH analysis.	11.0') and B-1001 have surrogate meet QC criteria due to sample dilution
a	The case narrative notes that project sample B-4-2016(1 5a-androstane (biased high) that does not meet QC criter nalysis.	1.0') has a surrogate recovery for ria due to sample dilution for DRO
n a tl	The case narrative notes that the laboratory control samp ot meet QC criteria (biased high) and the LCS duplicate nd bromomethane did not meet QC criteria (biased high hat these analytes were not detected above the LOQ in th	ble (LCS) recovery for bromomethane did (LCSD) recoveries for chloromethane) for VOC analysis. The laboratory states he associated samples.

c.	Were all corrective actions documented? Yes No NA (Please explain.)	Comments:
1	No corrective actions were documented by the la	iboratory.
d.	What is the effect on data quality/usability accounts and the effect on data quality/usability accounts and the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the effect of the ef	ording to the case narrative? Comments:
re	The laboratory does not specify any effect on the effect to Section 6 for further assessment.	e data quality or usability due to the QC failures;
Sampla.	es Results Correct analyses performed/reported as reques ∑Yes ☐ No ☐NA (Please explain.)	ted on COC? Comments:
b.	All applicable holding times met? ⊠Yes □ No □NA (Please explain.)	Comments:
c.	All soils reported on a dry weight basis? ⊠Yes □ No □NA (Please explain.)	Comments:
d.	Are the reported PQLs less than the Cleanup L project? Yes No NA (Please explain.)	evel or the minimum required detection level for th Comments:
I re d re b	Reporting values were below ADEC-established esults less than the limit of detection (LOD), wit ibromoethane and 1,2,3-trichloropropane had Lo esults cannot confirm that the analyte is present elow the LOD.	water or soil cleanup levels, where applicable, for h the following exceptions. The analytes 1,2- ODs above the groundwater cleanup levels. The at a concentration above the cleanup level, but
e.	Data quality or usability affected?	Comments:
	Yes; see above.	
<u>QC Sa</u> a.	amples Method Blank i. One method blank reported per matrix, ⊠Yes □ No □NA (Please explain.)	analysis and 20 samples? Comments:

6.

5.

ii. All method blank results less than PQL? \square Yes \square No \square NA (Please explain.)

Comments:

However, the following analytes had detections in the MB at estimated concentrations [less than the limit of quantitation (LOQ) but greater than the detection limit (DL)]:

1,2,3-Trichlorobenzene and chloromethane were detected at estimated concentrations in MB 1354116 associated with QC batch VXX/29621.

GRO was detected at an estimated concentration in MB 1354751 associated with QC batch VXX/29639.

2-Methylnaphthalene, benzo(a)anthracene, fluoranthene, phenanthrene, and pyrene were detected at estimated concentrations in MB 1353365 associated with QC batch XXX/36351.

RRO was detected at an estimated concentration in MB 1353644 associated with QC batch XXX/36360.

DRO was detected at an estimated concentration in MB 1354713 associated with QC batch XXX/36396.

iii. If above PQL, what samples are affected?

Comments:

1,2,3-Trichlorobenzene and chloromethane were not detected above the DL in the project samples associated with QC batch VXX/29621. The results are not affected by the detections in MB 1354116.

GRO was detected in all project samples associated with QC batch VXX/29639. The project samples with GRO concentrations greater than ten times the MB detection are not affected by the QC failure. The GRO detections in samples B-2-2016(36.0'), B-2-2016(49.5'), and the soil trip blank were within ten times the MB detection and are affected by the QC failure.

2-Methylnaphthalene, benzo(a)anthracene, fluoranthene, phenanthrene, and pyrene were detected in the samples associated with QC batch XXX/36351. The analytes benzo(a)anthracene, fluoranthene, phenanthrene, and pyrene were detected in project samples B-2-2016(9-15-16) and B-1004 at concentrations less than ten times the MB detections. The results for these analytes in project smples B-2-2016(9-15-16) and B-1004 are affected by the QC failure

RRO was detected in all of the samples associated with QC batch XXX/36360. The RRO results in samples B-4-2016(35.0') and B-1002 are withing ten times the concentration detected in the MB. The RRO results for these samples are affected by the QC failure.

DRO was detected in all samples associated with QC batch XXX/36396. The DRO results for samples B-1-2016(9-15-16), B-6-2016(9-16-16), B-2-2016(9-15-16), B-1004, and KACI(9-15-16) are within ten times the MB detection. The DRO results for these samples are affected by the QC failure.

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined? \Box Yes \Box No \Box NA (Please explain.) Comments:

The GRO result in sample B-2-2016(36.0') is between five and ten times the concentration detected in the method blank and is considered estimated, biased high, and flagged 'JH' in the analytical table.

The GRO results in the sample B-2-2016(49.5') and the soil trip blank are within five times the MB detection and are therefore considered to be the result of laboratory contamination. These results are considered not detected, no direction of bias, and flagged 'UB' at the LOQ in the analytical table.

The benzo(a)anthracene, fluoranthene, phenanthrene, and pyrene results in samples B-2-2016(9-15-16) and B-1004 are within five times the MB detection and are therefore considered to be the result of laboratory contamination. These results are considered not detected, no direction of bias, and flagged 'UB' at the LOQ in the analytical table.

The RRO result in the sample B-4-2016(35.0') is within five to ten times the concentration detected in the MB. The result is considered estimated, biased high, and flagged 'JH' in the analytical table. The RRO result in sample B-1002 is less than five times the concentration in the MB but greater than the LOQ. The result is considered not detected, no direction of bias, and flagged 'UB' at the detected result in the analytical table.

The DRO results in samples B-1-2016(9-15-16), B-6-2016(9-16-16), B-2-2016(9-15-16), B-1004, and KACI(9-15-16) are less than five times the MB concentration. The results are considered not detected at the sample concentration or the LOQ, whichever value is greater.

v. Data quality or usability affected? (Please explain.)

Comments:

Yes; see above

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
 ∑Yes ∑ No ∑NA (Please explain.)

LCS/LCSD samples were reported for BTEX, VOC, GRO, DRO, RRO, and PAH analyses for water samples.

LCS/LCSD samples were reported for GRO, DRO, and RRO analyses for soil samples.

LCS and MS/MSD samples were reported for PAH analyses.

LCS/LCSD and MS/MSD samples were reported for BTEX analysis.

- ii. Metals/Inorganics one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
- \Box Yes \Box No \boxtimes NA (Please explain.)

Comments:

Metals/inorganic analyses were not requested with this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) \forall Yes \forall No \forall NA (Please explain.) Comments:

The percent recovery for bromomethane did not meet QC criteria in LCS (1354117) or LCSD (1354118) for VOC analysis.

The percent recovery for chloromethane did not meet QC criteria in LCSD (1354118) for VOC analysis.

The percent recoveries for benzene, ethylbenzene, o-xylene, and p&m-xylene were outside of the laboratory limits in MS (1354756) and MSD (135757).

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DOOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No NA (Please explain.)

Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments:

LCS 1354117 and LCSD 1354118 is listed as batch OC for the samples KACI(9-15-16) and B-1003. However, neither bromomethane nor chloromethane were detected above the detection limit in either of these samples. The results are therefore not affected by the OC failures.

The parent sample concentrations in MS (1354756) and MSD (135757) were greater than or equal to the spiking concentrations. This may cause a significant uncertainty to the recovery calculations and the QC failures may not be representative of actual method performance. Additionally, the parent sample upon which the spike was performed was not part of the sample set submitted with this work order. The results are not affected by the MS and MSD recovery failures.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined? \forall Yes \forall No \forall NA (Please explain.) Comments:

The project samples are not considered affected by the QC failures; see above.

vii. Data quality or usability affected? (Use comment box to explain.) Comments:

The data quality and usability were not affected; see above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for o	organic analyses - field, QC and laboratory samples?
Yes No NA (Please explain.)	Comments:

 ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
 □Yes ⊠ No □NA (Please explain.)

Project samples B-5-2016(27.5'), B-2-2016(6.0'), B-2-2016(47.5'), B-4-2016(11.0'), and B-1002 have surrogate recoveries for 4-bromofluorobenzene (biased high) that do not meet QC criteria due to matrix interference for GRO analysis.

Project samples B-4-2016(11.0') and B-1001 have surrogate recoveries for 2-fluorobiphenyl (biased high) that do not meet QC criteria due to sample dilution for PAH analysis.

Project sample B-4-2016(11.0') has a surrogate recovery for 5a-androstane (biased high) that does not meet QC criteria due to sample dilution for DRO analysis.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

The GRO results in project samples with 4-bromofluorobenzene surrogate recoveries due to matrix interference are considered biased high and flagged with a 'JH' in the analytical table.

Surrogate recovery failures due to sample dilutions are not considered to affect the analytical results.

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

Comments:

Yes; see above.

- d. Trip blank Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and</u> <u>Soil</u>
 - i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

 \square Yes \square No \square NA (Please explain.)

Yes No NA (Please explain.)

Comments:

Trip blanks were analyzed for GRO, BTEX, and VOCs.

ii.	Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?
	(If not, a comment explaining why must be entered below)

· ·	,	
Yes	\boxtimes	No

D NA (Please explain.) Comments:

However, all samples were transported in a single cooler. Both soil and water trip blanks accompanied the volatile samples at all times.

iii. All results less than PQL?∑Yes □ No □NA (Please explain.)

Comments:

All results were below the LOQ (the laboratory PQL). However, the project analytes GRO, oxylene, and p&m -xylene were detected at estimated concentrations in the soil trip blank.

iv. If above PQL, what samples are affected?

Comments:

The GRO detection in the soil trip blank was roughly equivalent to the concentration detected in MB 1354751. We therefore believe that the GRO detection in the soil trip blank is the result of contamination during the analytical process rather than cross-contamination of the samples. However, the project samples B-1-2016(47.0'), B-2-2016(36.0'), B-2-2016(49.5'), B-6-2016(36.0'), B-7-2016(37.0'), B-8-2016(37.0'), and B-1002 are affected by the trip blank detections for o-xylene and p&m-xylene.

v. Data quality or usability affected? (Please explain.)

Comments:

The o-xylene results in the samples B-1-2016(47.0'), B-2-2016(36.0'), B-6-2016(36.0'), B-7-2016(37.0'), and B-8-2016(37.0') were less than five times the concentration detected in the soil trip blank and are considered not detected. The results are flagged 'UB' at the sample concentration or the LOQ (whichever is greater) in the analytical table.

The p&m -xylene results in the samples B-1-2016(47.0'), B-2-2016(36.0'), B-6-2016(36.0'), B-7-2016(37.0'), B-8-2016(37.0'), and B-1002 were less than five times the concentration detected in the soil trip blank and are considered not detected. The results are flagged 'UB' at the sample concentration or the LOQ (whichever is greater) in the analytical table.

The p&m -xylene concentration detected in the sample B-2-2016(49.5') was between five and ten times the concentration detected in the soil trip blank. The result is considered estimated, biased high, and flagged 'JH' in the analytical table.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples? Yes No NA (Please explain.) Comments: ii. Submitted blind to lab?∑Yes □ No □NA (Please explain.)

Comments:

The field duplicate pairs "B-4-2016(11.0') / B-1001," "B-5-2016(27.5') / B-1002," "KACI(9-15-16) / B-1003," and "B-2-2016(9-15-16) / B-1004" were submitted with this work order.

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

RPD (%) = Absolute value of: (R_1-R_2) $((R_1+R_2)/2)$ x 100

Where $R_1 =$ Sample Concentration
 $R_2 =$ Field Duplicate Concentration \Box Yes \boxtimes No \Box NA (Please explain.)Comments:

The RPDs for the field duplicate pair B-4-2016(11.0') / B-1001 were within acceptance criteria, (50% for soils) where calculable, for all analytes.

The RPDs for the field duplicate pair B-5-2016(27.5') / B-1002 were within acceptance criteria (50% for soils) for all analytes, with the exception of o-xylene and p&m -xylenes. The results for these analytes in the field duplicate samples are considered estimated (no bias) and are flagged 'J' (where not already qualified) to identify the imprecision.

The RPDs for the field duplicate pair KACI(9-15-16) / B-1003 were within acceptance criteria (30% for water) where calculable, for all analytes.

The RPDs for the field duplicate pair B-2-2016(9-15-16) / B-1004 were within acceptance criteria (30% for water) where calculable, for all analytes.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Yes; see above.

f. Decontamination or Equipment Blank (If not used explain why).

 \exists Yes \Box No \boxtimes NA (Please explain.)

Comments:

Equipment blanks were not submitted with this work order because samples were not collected with reusable sampling equipment.

i. All results less than PQL?

Yes No NA (Please explain.)

Comments:

Equipment blanks were not required for the project.

ii. If above PQL, what samples are affected?

Comments:

N/A; equipment blanks were not required for the project.

iii. Data quality or usability affected? (Please explain.)

Comments:

The data quality and usability were not affected; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

 \Box Yes \Box No \Box NA (Please explain.)

Comments:

There were no other data flags/qualifiers.

APPENDIX F

IMPORTANT INFORMATION ABOUT YOUR REPORT



Attachment to and part of Report: 31-1-11809-005

Date: July 31, 2017

To:	CEM Leasing Attn: Phil Tannehill
Re:	Interior Texaco Limited Site Characterization Report

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimation always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland