



**Travis/Peterson
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November 21, 2008
1301-01C

Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, Alaska 99709

**Attention: John Ebel
Environmental Program Specialist**

**Re: Environmental Services
Soil Excavation Activities, Headspace Sampling, and Confirmation Sampling**

Dear Mr. Ebel:

Travis/Peterson Environmental Consulting Inc. (TPECI) is pleased to present the following summary of composite soil sampling completed on October 7, 2008 at the Rainbow Valley Trailer Court near Fairbanks, Alaska (Figure 1). Figures are presented in Attachment 1. The photographic log is presented in Attachment 2. The site history is presented in Attachment 3. The ADEC Laboratory Data Checklist for this project is presented in Attachment 4. Project laboratory data is presented in Attachment 5.

SITE HISTORY

A site history has been prepared for this project and is attached to this letter (Attachment 3).

SUMMARY OF FIELD ACTIVITIES

On October 7, 2008, Dr. E.C. Packee, Jr. of Travis/Peterson Environmental Consulting, Inc. supervised the removal of the unregulated home heating oil tank (HHOT) and excavation of petroleum impacted soil at the site. Excavation of petroleum impacted soil continued until site conditions were deemed hazardous to worker safety and structures. The excavation limits were reached approximately 12 feet below existing ground surface. Headspace PID readings and laboratory analytical samples were collected from the excavation. Porous landscape fabric was placed at the margin of the excavation to identify clean fill from unexcavated soil. The site was backfilled with clean fill material and seeded.

RECEIVED

NOV 21 2008

**ADEC - SPILL PREVENTION
AND RESPONSE
FAIRBANKS**

TANK REMOVAL AND SOIL EXCAVATION

The first order of business was to establish the location where previous cleanup activities had been completed. Direct reading with a PID, calibrated to a 100 ppm isobutylene standard, indicated that the contamination was limited to the area immediately surrounding the HHOT and extended along the excavation floor approximately 20 feet from the exposed portion of the HHOT (south). The tank remained partially buried from previous excavation activities (Photograph No. 1). On October 7, 2008, the tank was exposed using a combination of machine excavation and hand excavation.

During the tank excavation, TPECI personnel noted that the soil impacts appeared to extend from the fill end of the tank towards the vent end of the tank (Photograph No. 2). Once the tank had been completely excavated, it was observed that the soil beneath the tank was heavily impacted by petroleum products which appear to originate from the fill end of the tank (Photograph No. 3). Once exposed, Dr. Packee requested that an ADEC representative be on site to observe the removal of the HHOT. Mr. Tom DeRuyter of the Fairbanks ADEC office was on site as the HHOT was lifted from the ground (Photograph No. 4). The tank itself was rusted and liquid was observed on the exterior of the tank. The liquid on the exterior of the tank appeared to be mostly water but evidence of fuel oil was observed (Photograph No 5). Due to safety and stability concerns, excavation was halted by Dr. Packee before the limits of petroleum impacted soils were reached. Headspace samples and analytical samples were collected extending from ground surface to the base of excavation on all three side walls. Headspace samples and laboratory analytical samples were collected from below the HHOT and the base of excavation at the midpoint of the tank.

DISPOSAL OF CONTAMINATED MEDIA

During the course of the excavation activities conducted on October 7, 2008, approximately 20 cubic yards of petroleum impacted soil was excavated. The contaminated soil was placed into a 10 cubic yard dump truck and hauled to OIT for disposal. Prior to leaving the site, the load was covered to prevent material loss during transport.

FIELD SCREENING

TPECI Senior Scientist Dr. Packee completed soil headspace screening of the contaminated soil within the excavation (Figure 2). All soil headspace samples were screened for the presence of organic compounds using a calibrated photoionization detector (PID).

The PID was calibrated using isobutylene standard gas (100 ppm). Soil samples were collected and allowed to sit for a minimum of 10 minutes prior to measuring the headspace with the PID. The highest PID value observed for each sample was written in a bound field notebook. Headspace PID results are presented in the following table and locations are shown in Figure 2.

**TABLE 1
 HEADSPACE PID VALUES**

Sample ID	Time	Location	Depth (ft bgs)	Result (ppm)
HS-1	10:15	south side tank	2.5	317
HS-2	10:20	north side tank	2.5	1200
HS-3	10:30	north side tank	5	470
S1	13:17	west sidewall	1	241
S2	13:20	west sidewall	4	1,411
S3	13:25	middle of tank	10	805
S4	13:30	south sidewall	4	994
S5	13:35	south sidewall	10	1,306
S6	13:40	north sidewall	4	996
S7	13:50	north sidewall	10	1,406
S9	13:55	middle of tank	13	1,603

LABORATORY CONFIRMATION RESULTS

The results of laboratory confirmation sampling are presented in Table 2.

**TABLE 2
 LABORATORY CONFIRMATION SAMPLING RESULTS**

Sample ID	RRO (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)	Benzene (ug/Kg)	Toulene (ug/Kg)	Ethylbenzene (ug/Kg)	Xylene (ug/Kg)
[†] MCL	22,000	10,250	1,400	9,000	180,000	110,000	81,000
S1	33.1	11.4	^{††} N.D.	N.D.	N.D.	N.D.	24.3
S2	81.1	23,200	1,190	2,180	55,100	42,400	281,000
S3	149	18,600	1,350	1,430	23,200	21,000	216,700
S4	129	25,900	1,920	2,310	55,500	52,300	393,000
S5	118	26,900	800	1,660	373,000	23,800	179,900
S6	43.2	6,580	584	402	12,000	14,100	106,000
S7	48.9	19,200	4,290	2,490	85,500	118,000	691,000
S8*	61.7	20,200	1,740	1,520	58,800	64,100	413,000
S9	78.1	27,700	1,690	1,880	52,200	54,200	381,000

[†]Inhalation soil cleanup levels from Table B2, Method Two, 18 AAC 75, values that exceed applicable MCLs are in bold.

^{††}N.D. indicates that parameter was not detected by laboratory analysis

* Blind field duplicate of sample S7

APPLICABLE ADEC CLEAN UP CRITERIA (18 AAC 75)

The ADEC soil cleanup levels used for this project are the most stringent requirements from Table B-2, Method 2 excluding the migration to groundwater pathway. The rationale for not using the migration to groundwater pathway is that the site is underlain by fine grained windblown loess and groundwater levels are in excess of 50 feet below the ground surface.

The subject site is located in the uplands north of Fairbanks. Soils at the site are composed of fine grained windblown loess with very low organic matter content at depth. The saturated hydraulic conductivity of loess in the Fairbanks area under dry unfrozen conditions is 0.283 feet per day (Kane and Stein, 1983). The effect of freezing on silt is minimal and Kane and Stein (1983) report no change in the hydraulic conductivity between dry frozen and dry unfrozen silts.

The distance to the nearest water supply well is greater than 500 feet. The depth to water in this well is reported to be in excess of 60 feet. The well itself is approximately 25 vertical feet below the subject site. Given the relatively low hydraulic conductivity of the silt mantle and a separation distance of 50 feet between the base of the HHOT and the aquifer, it is improbable that contamination could migrate to the aquifer.

LABORATORY QUALITY CONTROL/QUALITY ASSURANCE

Soil samples were analyzed by SGS Environmental Services. In accordance with applicable ADEC requirements, the Laboratory Data Review Checklist has been completed for this project and has been attached to this letter (Attachment 4). Specific discrepancies are noted in the following sections.

Laboratory Sample Receipt Documentation

The following laboratory quality control and quality assurance discrepancies were noted in the sample receipt documentation:

1. Cooler temperature was above the ADEC specified temperature range ($4^{\circ}\text{C} \pm 2^{\circ}\text{C}$).

The temperature blank was within the ADEC specified range and there was no effect on data quality.

Case Narrative

The following case narrative discrepancies were noted:

1. LCS spike and surrogate recoveries were outside acceptance limits and are biased low on several samples.
2. Some AK101/EPA 8021 samples biased high due to hydrocarbon interference.

There does not appear to be any effect on the field sample data quality.

Samples Results

The following sample result discrepancies were noted:

1. Dilution of some samples resulted in high PQLs.

The field sample data obtained is usable even with higher than expected PQLs even though some of the data is estimated.

Quality Control (QC) Results

The following quality control results discrepancies were noted:

1. Method blank for DRO is J flagged and considered an estimate;
2. Except for LCS on DRO and RRO percent recovery is low;
3. Except for LCS on DRO and RRO, RPD is greater than 20;
4. Samples S2, S3, S4, S5, S6, S7, S8, and S9 had recoveries of 4-bromoflourobeze in the GRO analysis due to matrix interference; and
5. GRO calculated RPD values are outside of acceptance range for soil analyses.

The suboptimal QC results are due to strong matrix interference in the field samples. The usability of the data does not appear to have been affected.

DISCUSSION

The spill to which TPECI personnel responded to in February 2008 was a surface spill of approximately 300 gallons of heating oil. The proximate cause of the spill was a back feed through the underground HHOT. The cause of the back feed was a valve that was left open that allowed fuel to drain from the aboveground fuel tank into the underground HHOT. Hydrostatic pressure from the AST forced the diesel fuel out of the underground HHOT through the vent pipe. The fill pipe on the underground HHOT has a screw on cap and no fuel was observed flowing from the fill at the time of discovery.

Based upon a visual inspection of the site at the time of discovery, fuel from the underground HHOT vent pipe flowed overland and pooled in against an adjoining trailer approximately 35 feet away. The first round of excavations performed by TPECI personnel excavated the contaminated soil between the two trailers and clean limits were confirmed by laboratory analysis between the trailers except for areas immediately adjacent to the HHOT.

The excavation activities performed on October 7, 2008 were directed at removing the contaminated media from around the underground HHOT. The excavation was suspended before soils below applicable ADEC soil cleanup levels were reached. The sample locations discussed below are shown in Figure 2. A review of the laboratory data indicates the following:

1. DRO levels increase towards the fill end of the tank
 - a. 4 feet BGS comparable samples S2, S4, and S6
 - i. S4 fill end of tank (25,600 ppm),
 - ii. S2 middle of tank (23,200 ppm), and
 - iii. S6 vent end of tank (6,580 ppm).
 - b. 10 ft BGS comparable samples – S5, S3, and S7
 - i. S5 fill end of tank (26,900 ppm),
 - ii. S3 middle of tank (18,600 ppm), and
 - iii. S7 vent end of tank (19,200 ppm).
2. DRO is below MCLs from soil samples taken at 1 foot bgs
 - a. S1 between the vent and fill pipes (11.4 ppm).
3. DRO levels increase with depth:
 - a. South sidewall – comparable samples S4 and S5
 - i. S4 south sidewall 4 feet bgs (25,600 ppm)
 - ii. S5 south sidewall 10 feet bgs (26,900 ppm)
 - b. Middle of tank – comparable samples S1, S2, S3, and S9
 - i. S1 west sidewall 1 foot bgs (11.4 ppm)
 - ii. S2 west sidewall 4 feet bgs (23,200 ppm)
 - iii. S3 below middle of tank 10 feet bgs (18,600 ppm), and
 - iv. S9 middle of tank 13 feet bgs (27,700 ppm).
 - c. North sidewall – comparable samples S6 and S7
 - i. S6 north sidewall 4 feet bgs (6,580 ppm), and
 - ii. S7 north sidewall 10 feet bgs (19,200 ppm).

The other laboratory parameters (Table 2) follow the same general pattern of increasing concentrations closer to the fill side of the tank and increasing concentrations with depth.

Additionally, the most heavily impacted soils appear to originate at the fill end of the tank (refer to Figure 2). These observations are inconsistent with a surface spill originating from the vent pipe. The data and observations are consistent with a spill originating at the fill end of the tank either overflows or a leaking line or fitting.

CONCLUSIONS

Based upon observations at the site, which are confirmed by laboratory data, a surface spill is unlikely to have caused the contamination around the underground HHOT. The soil between the vent and fill pipes (Sample S1) meets applicable soil cleanup levels for petroleum products. The widespread contamination at depth appears to originate from the fill end of the tank. Samples collected from 4 feet bgs toward the fill end of the tank have comparable levels of all laboratory analyzed parameters (Samples S2, S4). Sample S-6, located closest to the vent pipe (source of spill), had significantly lower petroleum hydrocarbon levels. The observed pattern of ground staining and laboratory results are inconsistent with a spill originating from the vent pipe.

RECOMMENDATIONS

At this time, cleanup of the surface spill has been completed. Contamination that is unrelated to the surface spill remains on site. However, until the existing trailer can be removed, the contaminated soil is located at a depth which makes excavation unsafe and impractical. It is estimated that there is between 25 and 50 cubic yards of contaminated material remaining at depth.

Please feel free to contact me if you have any questions or comments regarding this report.

Sincerely,



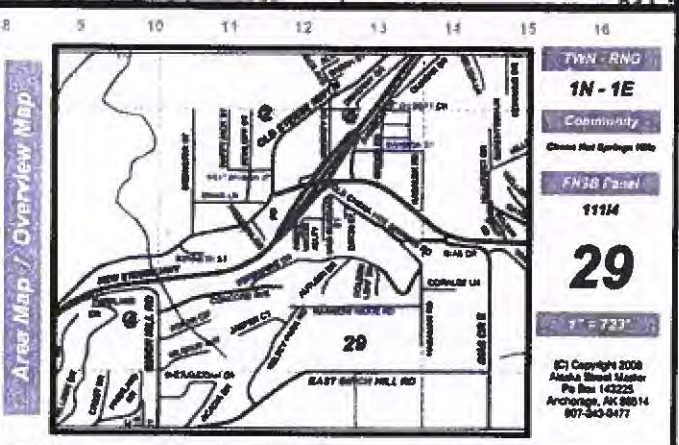
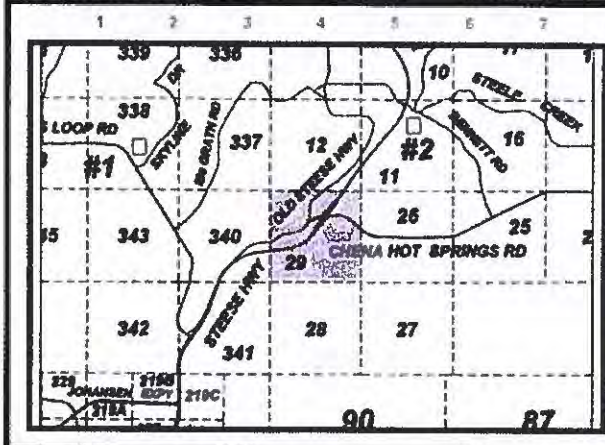
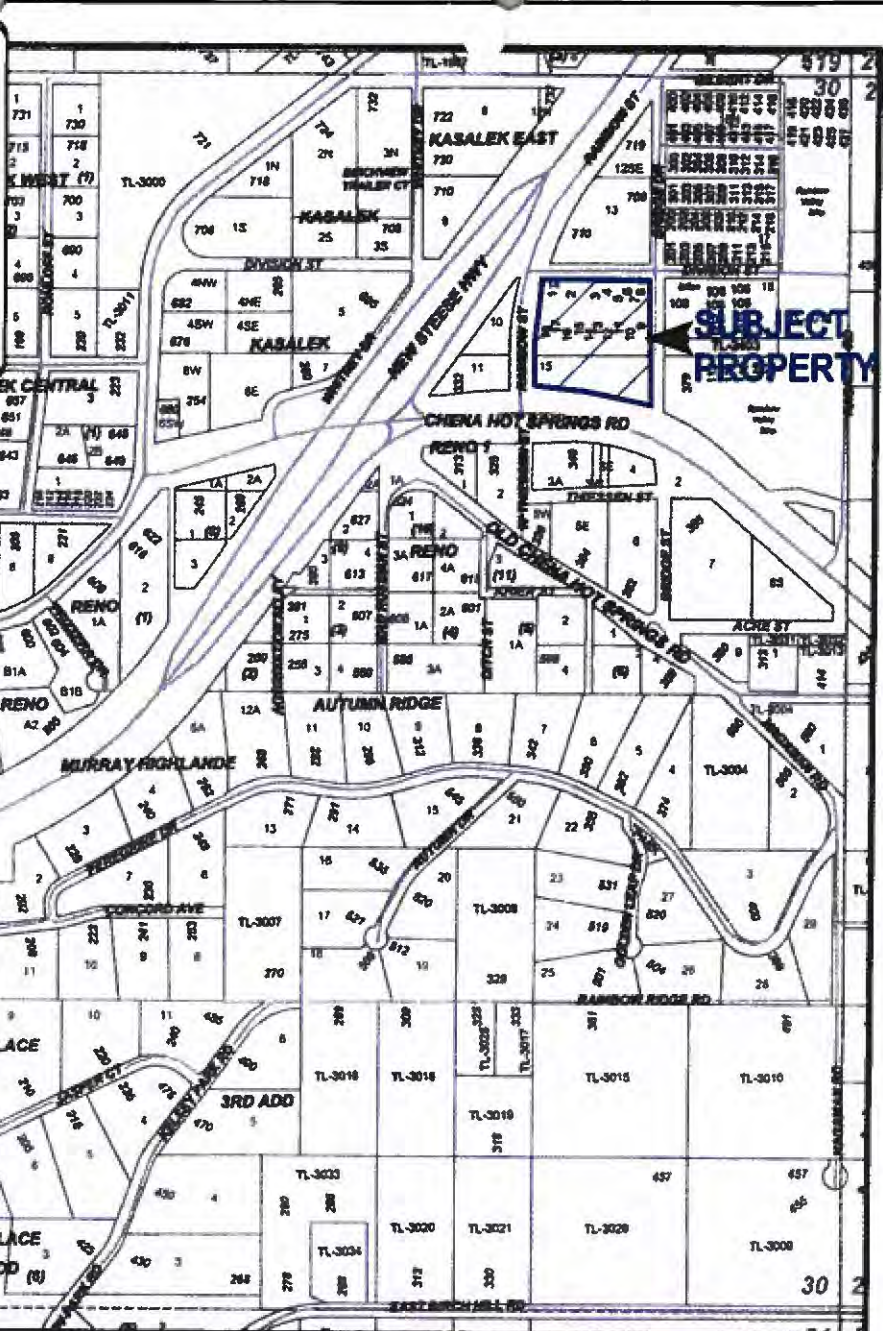
Edmond C. Packee Jr., PhD. CPSSc. CPESC, CPSWQ, CESSWI
Senior Scientist

cc: Jason Cevasco, ENCO Heating
Matt Patterson, Crawford & Company

Attachments: Figures 1 and 2
Photographic Log
Site History
ADEC Laboratory Data Review Checklist
Laboratory Analytical Report.

ATTACHMENT 1

FIGURES



TWN - RND
 1N - 1E
 Community
 Chena Hot Springs 100
 FNSB Parcel
 111M
29
 1" = 723'
 (C) Copyright 2008
 Alaska Street Mapper
 Po Box 142225
 Anchorage, AK 99514
 907-543-8477

TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
 329 2ND STREET
 FAIRBANKS, ALASKA 99701

ENCO HEATING, INC.

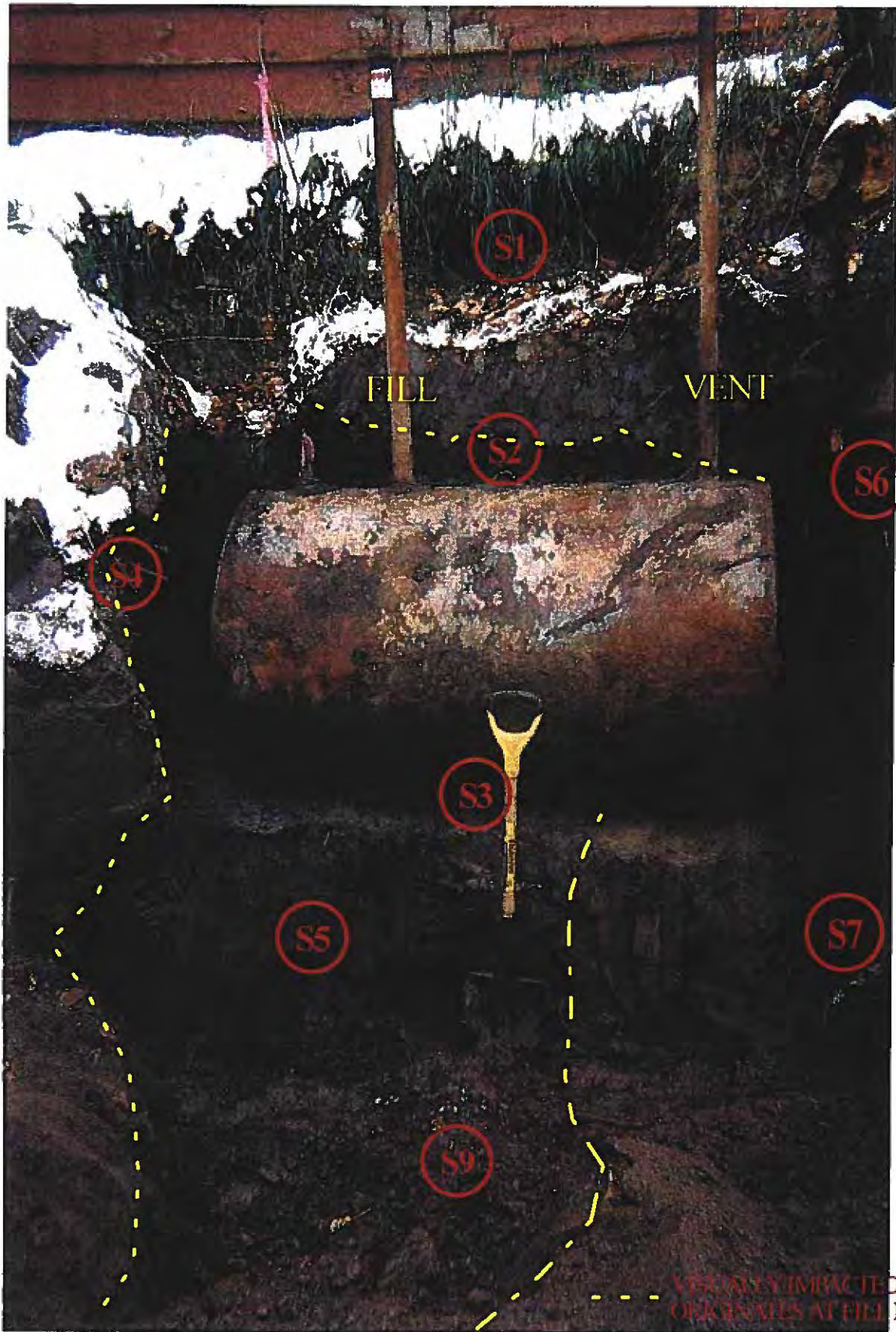
LOCATION & VICINITY
 FIGURE 1

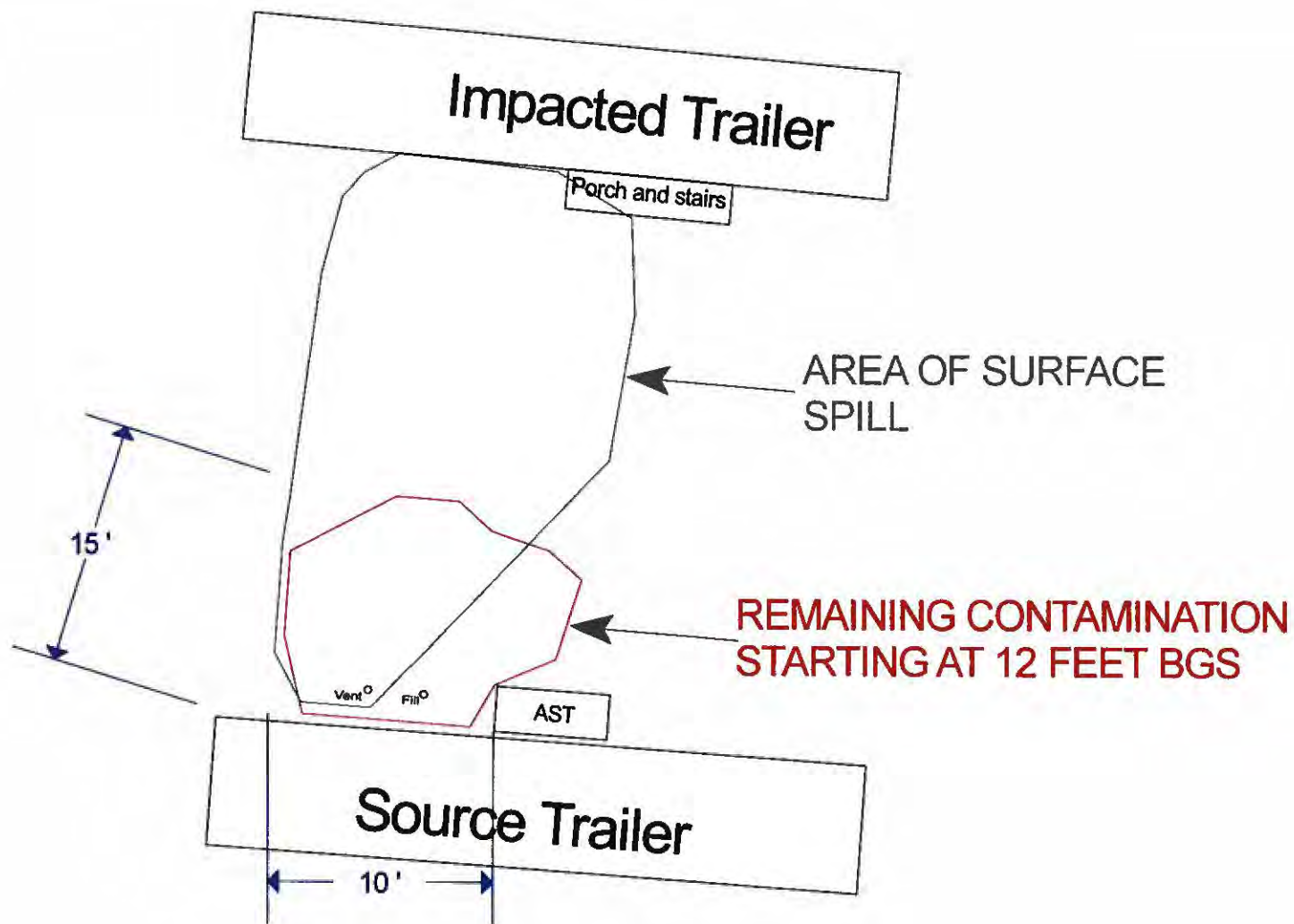
PROJECT No: 1301-01C

FILE: S:\Projects\1301\01C\Figures\Figure 1 - Location & Vicinity.SKF

DATE: 11/20/08

SCALE: AS SHOWN





ATTACHMENT 2
PHOTOGRAPHIC LOG



Photograph No. 1

The underground HHOT Partially exposed. Open excavation is approximately 10 feet wide. Capped fill pipe is on the left side of the tank and open vent pipe is on the right side of the tank.



Photograph No. 2

Underground HHOT. Note the visually impacted soil originates at the fill end of the tank.



Photograph No. 3

Removal of the underground HHOT. Not visually impacted soil at fill end of the tank.



Photograph No. 4

Note water and fuel on exterior of underground HHOT following removal.



Photograph No. 5

Removal of the underground HHOT.



Photograph No. 6

Note the significant visual staining above and below the underground HHOT on the fill end of the tank.



Photograph No. 8

View of staining at fill end of the tank taken from above the excavation.

ATTACHMENT 3
SITE HISTORY

ADEC FILE NO.

SITE HISTORY – RAINBOW VALLEY TRAILER COURT HEATING OIL SPILL CLEANUP

- February 14, 2008: Estimate provided to ENCO Heating for initial cleanup from AST overflow.
- February 19, 2008: Work plan submitted to ADEC.
- February 19, 2008: Ed Meggert of ADEC gave verbal approval to Larry Peterson for the submitted work plan.
- February 26, 2008: Cost estimate provided to ENCO Heating based on approved work plan.
- February 26, 2008: John Ebel of ADEC requested changes to the work plan.
- March 6, 2008: John Ebel of ADEC issued a notice of inadequate response to ENCO.
- March 7, 2008: Contaminated snow and leaf litter removed from site. TPECI personnel directed the contaminated snow and leaf litter removal completed by MCM Roe, Inc. Approximately three dump truck loads of contaminated material was transported to 2775 Phillips Field Road and stored in an ADEC approved containment cell located.
- March 20, 2008: Cost estimate provided to ENCO Heating for excavation of contaminated snow and leaf litter from surface.
- April 4, 2008: Photos taken of containment cell with contaminated snow and leaf litter.
- April 8, 2008: TPECI personnel provided a summary of excavation activities completed to date to ENCO Heating.
- April 20, 2008: Photos taken of containment cell with contaminated snow and leaf litter.
May 6, 2008: Photos taken of containment cell with contaminated snow and leaf litter.
- May 8, 2008: Summary of containment cell monitoring prepared for ENCO Heating.
- May 13, 2008: John Ebel emailed ENCO Heating regarding the headspace sample he had collected the day before and requested cleanup as soon as possible.
- May 23, 2008: Headspace sampling was conducted at the subject property. On May 23, 2008, TPECI personnel and Warren Howard of Quality Excavating arrived onsite to excavate contaminated soil. The impacted area was excavated to 12 inches bgs (the first lift). All of the PID values for the first lift of soil were in excess of the 50 ppm cutoff. These values were from the soil surface prior to excavation.

Soil screening values ranged from 50 ppm to over 1,000 ppm in the areas adjacent to the vent and fill pipes of the UST.

The soils on the northern portion (extending approximately 2 feet south) of the excavation area had PID values of 10 ppm or less. No additional excavation was required for this area.

The second lift (approximately 2 feet bgs) was focused on the contaminated area by the impacted trailer and the vent and fill pipes of the UST. This soil was highly contaminated and PID values ranged from 50 ppm to over 1,200 ppm adjacent to the fill and vent pipes.

A total of 4 truckloads (approximately 40 cy) of contaminated soil were removed from the site and hauled to 2575 Phillips Field Road, placed on a 10-mil polyethylene liner and covered.

In the third lift of soil the PID values remained above 50 ppm. Soil excavation adjacent to the impacted trailer was limited due to structural stability and worker safety concerns.

The soil in the fourth lift (4 feet bgs) had even higher PID values adjacent to the fill and vent pipes. At this point during soil removal, TPECI personnel determined that the contamination encountered at depth was likely historic rather than a result of the AST overflow.

Contaminated soil was excavated down to the UST surface and PID values were greater than 1,000 ppm.

TPECI personnel completed PID screening from the UST fill pipe to the impacted trailer every 5 feet. At the fill pipe PID values were 1,500 ppm. PID values at the impacted trailer were 30 ppm.

During the soil removal activities, excavation was limited due to the frozen soil layer and the uncertainty of who the responsible party was for the additional contamination. TPECI requested the Alaska Department of Environmental Conservation (ADEC) come on site to help determine the necessary corrective actions for the additional contamination.

Following removal of the contaminated media down to frozen ground, TPECI personnel completed headspace sampling of the excavated area to determine where to collect confirmation samples and ensure that all of the contaminated media associated with the AST overflow was successfully removed.

The PID was calibrated with isobutylene standard gas (100 ppm) and a correction factor of 0.54. TPECI personnel collected 32 headspace samples. Two of the samples were collected by the porch of the impacted trailer to ensure that contamination was not present beyond the excavated area.

The subsurface contamination was located at the source trailer surrounding the UST. PID values in this area ranged from 40.5 ppm to 1,373 ppm. Kindra Geis and Dr. Eddie Packee of TPECI met with John Ebel of the ADEC at the subject property to review the excavation activities and address the concerns regarding the historic contamination at the UST location. Mr. Ebel agreed that there appeared to be another source. Mr. Ebel suggested that ENCO, ADEC, and TPECI conduct a meeting to determine how to address the residual contamination.

- June 13, 2008: Summary of soil excavation activities prepared for ENCO Heating.
- July 2, 2008: On July 2, 2008, Larry Peterson and Kindra Geis of TPECI, John Ebel and Ed Meggert of the ADEC, Gordon and Cheryl DePue, trailer owners, met at the Rainbow Valley Trailer Park to discuss the soil contamination issue.
- July 26-29, 2008: Rainbow Valley Trailer Park – Contaminated Soil Cleanup

On July 26, 2008, TPECI personnel and Warren Howard of Quality Excavating arrived on site to remove the remainder of contaminated soil related to the AST overflow. Following removal of the contaminated soil TPECI personnel completed headspace sampling of the excavation to determine whether all of the contaminated soil had been removed.

TPECI personnel collected 15 soil headspace samples at five foot intervals, and at a minimum depth of 6 inches below ground surface (bgs). The soil was placed in Ziploc baggies and allowed to warm for a minimum of 10 minutes prior to analyzing with the PID.

PID values observed during this round of excavation ranged from 257 ppm to 1500 ppm. When compared to the maximum screening value observed during the first round of soil removal (1,373 ppm), contamination appeared to increase with depth.

Based on PID values, remaining contamination was located at the source trailer directly adjacent and above the UST. TPECI collected eight confirmation samples from the second round of soil excavation. Three stockpile confirmation samples were collected. According to the laboratory data, samples 1, 3, 4, 6, SP1, SP2, Vent, and Fill had a pattern that was consistent with a weathered middle distillate which confirms the

assumption that the subsurface contamination was the result of historic spills or leaks at the UST. The area impacted by the AST overflow was considered clean based on confirmation sampling results.

- August 8, 2008: Letter report regarding July 26-29, 2008 excavation and sampling
- August 20, 2008: Letter report regarding July 26-29, 2008 excavation and sampling sent to ADEC.
- August 29, 2008: John Ebel of ADEC wrote a letter indicating that clean-up was not complete.
- October 1, 2008: Permission obtained from property owner to remove UST if needed .
- October 7, 2008: The former heating oil UST and approximately 20 cubic yards of contaminated soil were removed. Soil samples collected for DRO/ RRO analysis by Method AK102/103 and GRO/ BTEX analysis by Method AK101/8021.

ATTACHMENT 4

ADEC LABORATORY DATA REVIEW CHECKLIST

Laboratory Data Review Checklist

Completed by:

Title:

Date:

CS Report Name:

Report Date:

Consultant Firm:

Laboratory Name:

Laboratory Report Number:

ADEC File Number:

ADEC RecKey Number:

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No Comments:

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 Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

Yes No

Comments:

The temperature blan was within range. The cooler temp was slightly warm.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No

Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No

Comments:

Good.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No

Comments:

Cooler temp out of range.

e. Data quality or usability affected? Explain.

Comments:

No because all of the volatile samples to be analyzed were preserved with methanol.

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments:

c. Were all corrective actions documented?

Yes No

Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

LCS spike and surrogate recoveries were outside acceptance limits and are biased low on several samples. However, the field data are not biased low. Some AK1018021 samples biased high due to hydrocarbon interference. See Case Narrative.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No

Comments:

However, some samples had to be diluted which elevated the PQL.

e. Data quality or usability affected? Explain.

Comments:

Data usable however some results are considered estimated.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No Comments:

ii. All method blank results less than PQL?

Yes No Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No Comments:

v. Data quality or usability affected? Explain.

Comments:

Method blank for DRO is J flagged and considered estimated. Data are still usable.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No Comments:

No metals samples.

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)

Yes No Comments:

Except for LCS on DRO and RRO. Page 44 of 50. Pct. recovery is low.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, 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 Comments:

Except for LCS on DRO and RRO. RPD is greater than 20.

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

Comments:

Only the LCS samples for DRO and RRO. Page 44 of 50.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No Comments:

vii. Data quality or usability affected? Explain.

Comments:

No affect on quality of field data.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No 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 Comments:

Samples S2, S3, S4, S5, S6, S7, S8, and S9 had recoveries of 4-Bromofluorobenzene that were extremely high on the GRO analysis. The field samples had very high concentrations of contaminants that interfered with the surrogate analyses and caused the recoveries to spike out of range.

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

Yes No Comments:

They have an asterisk next to the reported value.

iv. Data quality or usability affected? Explain.

Comments:

The field data are not affected. The high percent surrogat recovery is a reflection of the extremely high concentrations of contaminants present in the soil samples.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

ii. All results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Data quality or usability affected? Explain.

Comments:

N/A

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

S8 is the blind duplicate for S7.

ii. Submitted blind to lab?

Yes No

Comments:

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

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No Comments:

The RPD for GRO is 84.58%, benzene is 48.4%, and DRO is 0.5%. The GRO RPD is out of acceptance range for soil analyses. See page 28 of 50 in laboratory analytical report for calculations.

- iv. Data quality or usability affected? Explain.

Comments:

- f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

- i. All results less than PQL?

Yes No Comments:

N/A

- ii. If above PQL, what samples are affected?

Comments:

N/A

- iii. Data quality or usability affected? Explain.

Comments:

N/A

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

- a. Defined and appropriate?

Yes No Comments:

ATTACHMENT 5
LABORATORY ANALYTICAL REPORT



**SGS Environmental Services
Alaska Division
Level II Laboratory Data Report**

Project: Soils
Client: Travis/Peterson
SGS Work Order: 1085964

Released by:

A handwritten signature in black ink that reads "Stephen C. Ede".

Alaska Division Technical Director

Stephen C. Ede
2008.11.04
09:14:34 -09'00'

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

Note:

Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Client Name: Travis/Peterson

Project Name: Soils

Workorder No.: 1085964

Sample Comments

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

<u>Lab Sample ID</u>	<u>Sample Type</u>	<u>Client Sample ID</u>
1085964001	PS	S1
	AK103 - Unknown hydrocarbon with several peaks is present. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria. The sample was re-extracted and re-analyzed outside of hold time with passing QCs and results confirmed.	
1085964002	PS	S2
	AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference. AK103 - The sample was diluted due to the fuel odor; therefore, the PQLs are elevated. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria. AK102 - The pattern is consistent with a weathered middle distillate.	
1085964003	PS	S3
	AK102 - The pattern is consistent with a weathered middle distillate. AK103 - Unknown hydrocarbon with several peaks is present. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria.	
1085964004	PS	S4
	AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference. AK103 - Unknown hydrocarbon with several peaks is present. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria. AK102 - The pattern is consistent with a weathered middle distillate.	
1085964005	PS	S5
	AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference. AK103 - Unknown hydrocarbon with several peaks is present. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria. AK102 - The pattern is consistent with a weathered middle distillate.	
1085964006	PS	S6
	AK102 - The pattern is consistent with a weathered middle distillate. AK103 - The sample was diluted due to the fuel odor; therefore, the PQLs are elevated. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria.	
1085964007	PS	S7
	AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference. AK103 - The sample was diluted due to the fuel odor; therefore, the PQLs are elevated. AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria. AK102 - The pattern is consistent with a weathered middle distillate.	
1085964008	PS	S8

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.
AK103 - The sample was diluted due to the fuel odor; therefore, the PQLs are elevated.
AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria.
AK102 - The pattern is consistent with a weathered middle distillate.

1085964009

PS S9

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.
AK103 - The sample was diluted due to the fuel odor; therefore, the PQLs are elevated.
AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria.
AK102 - The pattern is consistent with a weathered middle distillate.

866000

LCS LCS for HBN 207977 [XXX/20239]

AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria. Associated samples will be re-extracted for re-analyzed for confirmation.

866001

LCSD LCSD for HBN 207977 [XXX/20239]

AK102/103 - LCS spike and surrogate recoveries are outside of acceptance criteria, biased low. LCS/LCSD RPD is outside of acceptance criteria.



Laboratory Analytical Report

Client: **Travis/Peterson**
329 2nd Stree
Fairbanks, AK 99701

Attn: **Eddie Packee**
T: (907)455-7225 F:(907)455-7228
eddie@tpeci.com

Project: **Soils**

Workorder No.: **1085964**

Alaska Division Technical Director

Stephen C. Ede
2008.11.04
09:14:50 -09'00'

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Carmon Beene

Project Manager

Enclosed are the analytical results associated with this workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Assurance Plan (QAP), which outlines this program is available at your request.

The Laboratory certification numbers are AK971-05 (DW), UTS-005 (CS) and AK00971 (Micro) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 8015B, 8021B, 8081A/8082, 8260B, 8270C).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP, the National Environmental Laboratory Accreditation Program and, when applicable, other regulatory authorities.

If you have any questions regarding this report or if we can be of any assistance, please contact your SGS Project Manager at 907-562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

MDL	Method Detection Limit
PQL	Practical Quantitation Limit (reporting limit).
CL	Control Limit
U	Indicates the analyte was analyzed for but not detected.
F	Indicates value that is greater than or equal to the MDL.
J	The quantitation is an estimation.
ND	Indicates the analyte is not detected
B	Indicates the analyte is found in a blank associated with the sample.
+	The analyte has exceeded allowable regulatory or control limits.
D	The analyte concentration is the result of dilution.
GT	Greater Than
LT	Less Than
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
E	The analyte result is above the calibrated range.
R	Rejected
DF	Analytical Dilution Factor
JL	The analyte was positively identified, but the quantitation is a low estimation.
<Surr>	Surrogate QC spiked standard
<Surr/IS>	Surrogate / Internal Standard QC spiked standard
QC	Quality Control
QA	Quality Assurance
MB	Method Blank
LCS (D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
BMS(D)	Site Specific Matrix Spike
RPD	Relative Percent Difference
ICV	Initial Calibration Verification
CCV	Continuous Calibration Verification
MSA	Method of Standard Addition

Notes: Soil samples are reported on a dry weight basis unless otherwise specified
All DRO/RRO analyses are integrated per SOP.



SAMPLE SUMMARY

Print Date: 11/3/2008

Client Name: Travis/Peterson
Project Name: Soils
Workorder No.: 1085964

Analytical Methods

<u>Method Description</u>	<u>Analytical Method</u>
AK101/8021 Combo. (S)	AK101
AK101/8021 Combo. (S)	SW8021B
Diesel/Residual Range Organics	AK102
Diesel/Residual Range Organics	AK103
Percent Solids SM2540G	SM20 2540G

Sample ID Cross Reference

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
1085964001	S1
1085964002	S2
1085964003	S3
1085964004	S4
1085964005	S5
1085964006	S6
1085964007	S7
1085964008	S8
1085964009	S9
1085964010	Trip Blank



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S1
SGS Ref. #: 1085964001
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 80.8

Collection Date/Time: 10/07/08 13:17
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	ND	3.58	0.717	mg/Kg	1	VFC9215	VXX18888	
Benzene	ND	17.9	5.74	ug/Kg	1	VFC9215	VXX18888	
Toluene	ND	71.7	21.5	ug/Kg	1	VFC9215	VXX18888	
Ethylbenzene	ND	71.7	21.5	ug/Kg	1	VFC9215	VXX18888	
o-Xylene	ND	71.7	21.5	ug/Kg	1	VFC9215	VXX18888	
P & M -Xylene	24.3 J	71.7	21.5	ug/Kg	1	VFC9215	VXX18888	
4-Bromofluorobenzene <sur>	103	50-150		%	1	VFC9215	VXX18888	
1,4-Difluorobenzene <sur>	95.1	80-120		%	1	VFC9215	VXX18888	

Batch Information

Analytical Batch: VFC9215
Analytical Method: AK101
Analysis Date/Time: 10/14/08 03:41
Dilution Factor: 1

Prep Batch: VXX18888
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:17

Initial Prep Wt./Vol.: 64.617 g
Prep Extract Vol.: 37.42 mL
Container ID:1085964001-A
Analyst: HM

Analytical Batch: VFC9215
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 03:41
Dilution Factor: 1

Prep Batch: VXX18888
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:17

Initial Prep Wt./Vol.: 64.617 g
Prep Extract Vol.: 37.42 mL
Container ID:1085964001-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S1
SGS Ref. #: 1085964001
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 80.8

Collection Date/Time: 10/07/08 13:17
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	11.4 J	24.4	2.44	mg/Kg	1	XFC8295	XXX20239	
Residual Range Organics	33.1	24.4	2.44	mg/Kg	1	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	68.9	50-150		%	1	XFC8295	XXX20239	
5a Androstane <sur>	66.1	50-150		%	1	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295
Analytical Method: AK102
Analysis Date/Time: 10/22/08 20:38
Dilution Factor: 1

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.408 g
Prep Extract Vol.: 1 mL
Container ID:1085964001-B
Analyst: GL

Analytical Batch: XFC8295
Analytical Method: AK103
Analysis Date/Time: 10/22/08 20:38
Dilution Factor: 1

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.408 g
Prep Extract Vol.: 1 mL
Container ID:1085964001-B
Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: **S1**
SGS Ref. #: 1085964001
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 80.8

Collection Date/Time: 10/07/08 13:17
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Total Solids	80.8			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1085964001-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: **S2**
SGS Ref. #: 1085964002
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 82.1

Collection Date/Time: 10/07/08 13:20
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1190	374	74.8	mg/Kg	100	VFC9216	VXX18891	
Benzene	2180	1870	599	ug/Kg	100	VFC9216	VXX18891	
Toluene	55100	7480	2240	ug/Kg	100	VFC9216	VXX18891	
Ethylbenzene	42400	7480	2240	ug/Kg	100	VFC9216	VXX18891	
o-Xylene	91300	7480	2240	ug/Kg	100	VFC9216	VXX18891	
P & M -Xylene	190000	7480	2240	ug/Kg	100	VFC9216	VXX18891	
4-Bromofluorobenzene <surp>	5800	* 50-150		%	100	VFC9216	VXX18891	
1,4-Difluorobenzene <surp>	89	80-120		%	100	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 17:15
Dilution Factor: 100

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:20

Initial Prep Wt./Vol.: 57.455 g
Prep Extract Vol.: 35.29 mL
Container ID:1085964002-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 17:15
Dilution Factor: 100

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:20

Initial Prep Wt./Vol.: 57.455 g
Prep Extract Vol.: 35.29 mL
Container ID:1085964002-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S2
SGS Ref. #: 1085964002
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 82.1

Collection Date/Time: 10/07/08 13:20
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	23200	1190	119	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	81.1 J	95.2	9.52	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <sur>	107	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	75.1	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.719 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 20:48	Prep Date/Time: 10/21/08 10:00	Container ID:1085964002-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.719 g
Analytical Method: AK103	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 20:48	Prep Date/Time: 10/21/08 10:00	Container ID:1085964002-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8298	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.719 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/23/08 17:36	Prep Date/Time: 10/21/08 10:00	Container ID:1085964002-B
Dilution Factor: 50		Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S2
SGS Ref. #: 1085964002
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 82.1

Collection Date/Time: 10/07/08 13:20
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Total Solids	82.1			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1085964002-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S3
SGS Ref. #: 1085964003
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 75.8

Collection Date/Time: 10/07/08 13:25
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1350	284	56.9	mg/Kg	50	VFC9216	VXX18891	
Benzene	1430	28.4	9.10	ug/Kg	1	VFC9215	VXX18888	
Toluene	23200	5690	1710	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	21000	5690	1710	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	84700	5690	1710	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	132000	5690	1710	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	4780	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	94.8	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9215 Analytical Method: SW8021B Analysis Date/Time: 10/14/08 04:17 Dilution Factor: 1	Prep Batch: VXX18888 Prep Method: SW5035A Prep Date/Time: 10/07/08 13:25	Initial Prep Wt./Vol.: 40.28 g Prep Extract Vol.: 34.74 mL Container ID:1085964003-A Analyst: HM
Analytical Batch: VFC9216 Analytical Method: AK101 Analysis Date/Time: 10/14/08 14:30 Dilution Factor: 50	Prep Batch: VXX18891 Prep Method: SW5035A Prep Date/Time: 10/07/08 13:25	Initial Prep Wt./Vol.: 40.28 g Prep Extract Vol.: 34.74 mL Container ID:1085964003-A Analyst: HM
Analytical Batch: VFC9216 Analytical Method: SW8021B Analysis Date/Time: 10/14/08 14:30 Dilution Factor: 50	Prep Batch: VXX18891 Prep Method: SW5035A Prep Date/Time: 10/07/08 13:25	Initial Prep Wt./Vol.: 40.28 g Prep Extract Vol.: 34.74 mL Container ID:1085964003-A Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S3
SGS Ref. #: 1085964003
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 75.8

Collection Date/Time: 10/07/08 13:25
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	18600	1310	131	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	149	105	10.5	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <sur>	113	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	95	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295
Analytical Method: AK102
Analysis Date/Time: 10/22/08 20:57
Dilution Factor: 4

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.148 g
Prep Extract Vol.: 1 mL
Container ID:1085964003-B
Analyst: GL

Analytical Batch: XFC8295
Analytical Method: AK103
Analysis Date/Time: 10/22/08 20:57
Dilution Factor: 4

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.148 g
Prep Extract Vol.: 1 mL
Container ID:1085964003-B
Analyst: GL

Analytical Batch: XFC8298
Analytical Method: AK102
Analysis Date/Time: 10/23/08 17:45
Dilution Factor: 50

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.148 g
Prep Extract Vol.: 1 mL
Container ID:1085964003-B
Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S3
SGS Ref. #: 1085964003
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 75.8

Collection Date/Time: 10/07/08 13:25
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Total Solids	75.8			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID: 1085964003-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S4
SGS Ref. #: 1085964004
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 76.5

Collection Date/Time: 10/07/08 13:30
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1920	263	52.6	mg/Kg	50	VFC9216	VXX18891	
Benzene	2310	1310	421	ug/Kg	50	VFC9216	VXX18891	
Toluene	55500	5260	1580	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	52300	5260	1580	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	135000	5260	1580	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	258000	5260	1580	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	7380	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	93	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 17:33
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:30

Initial Prep Wt./Vol.: 43.954 g
Prep Extract Vol.: 35.34 mL
Container ID:1085964004-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 17:33
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:30

Initial Prep Wt./Vol.: 43.954 g
Prep Extract Vol.: 35.34 mL
Container ID:1085964004-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S4
SGS Ref. #: 1085964004
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 76.5

Collection Date/Time: 10/07/08 13:30
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	25900	1300	130	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	129	104	10.4	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <surr>	107	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <surr>	77.9	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.11 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 21:16	Prep Date/Time: 10/21/08 10:00	Container ID:1085964004-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.11 g
Analytical Method: AK103	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 21:16	Prep Date/Time: 10/21/08 10:00	Container ID:1085964004-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8298	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.11 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/23/08 17:55	Prep Date/Time: 10/21/08 10:00	Container ID:1085964004-B
Dilution Factor: 50		Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S4
SGS Ref. #: 1085964004
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 76.5

Collection Date/Time: 10/07/08 13:30
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Total Solids	76.5			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID: 1085964004-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S5
SGS Ref. #: 1085964005
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.0

Collection Date/Time: 10/07/08 13:35
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	800	223	44.6	mg/Kg	50	VFC9216	VXX18891	
Benzene	1660	1110	356	ug/Kg	50	VFC9216	VXX18891	
Toluene	37300	4460	1340	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	23800	4460	1340	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	70900	4460	1340	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	109000	4460	1340	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	3640	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	89.9	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 14:48
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:35

Initial Prep Wt./Vol.: 54.691 g
Prep Extract Vol.: 37.55 mL
Container ID:1085964005-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 14:48
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:35

Initial Prep Wt./Vol.: 54.691 g
Prep Extract Vol.: 37.55 mL
Container ID:1085964005-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: **S5**
SGS Ref. #: 1085964005
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.0

Collection Date/Time: 10/07/08 13:35
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	26900	1270	127	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	118	102	10.2	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <sur>	134	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	90.8	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295
Analytical Method: AK102
Analysis Date/Time: 10/22/08 21:25
Dilution Factor: 4

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.563 g
Prep Extract Vol.: 1 mL
Container ID:1085964005-B
Analyst: GL

Analytical Batch: XFC8295
Analytical Method: AK103
Analysis Date/Time: 10/22/08 21:25
Dilution Factor: 4

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.563 g
Prep Extract Vol.: 1 mL
Container ID:1085964005-B
Analyst: GL

Analytical Batch: XFC8298
Analytical Method: AK102
Analysis Date/Time: 10/23/08 18:04
Dilution Factor: 50

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.563 g
Prep Extract Vol.: 1 mL
Container ID:1085964005-B
Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S5
SGS Ref. #: 1085964005
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.0

Collection Date/Time: 10/07/08 13:35
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Total Solids	77.0			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID: 1085964005-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S6
SGS Ref. #: 1085964006
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.5

Collection Date/Time: 10/07/08 13:40
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	584	167	33.4	mg/Kg	50	VFC9216	VXX18891	
Benzene	402	16.7	5.34	ug/Kg	1	VFC9215	VXX18888	
Toluene	12000	3340	1000	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	14100	3340	1000	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	39000	3340	1000	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	67000	3340	1000	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	4220	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	89.2	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9215
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 05:12
Dilution Factor: 1

Prep Batch: VXX18888
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:40

Initial Prep Wt./Vol.: 61.212 g
Prep Extract Vol.: 34.51 mL
Container ID:1085964006-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 15:06
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:40

Initial Prep Wt./Vol.: 61.212 g
Prep Extract Vol.: 34.51 mL
Container ID:1085964006-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 15:06
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:40

Initial Prep Wt./Vol.: 61.212 g
Prep Extract Vol.: 34.51 mL
Container ID:1085964006-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: **S6**
SGS Ref. #: 1085964006
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.5

Collection Date/Time: 10/07/08 13:40
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	6580	235	23.5	mg/Kg	10	XFC8298	XXX20239	
Residual Range Organics	43.2 J	93.9	9.39	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <surr>	67.8	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <surr>	77.2	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.27 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 21:35	Prep Date/Time: 10/21/08 10:00	Container ID:1085964006-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.27 g
Analytical Method: AK103	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 21:35	Prep Date/Time: 10/21/08 10:00	Container ID:1085964006-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8298	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.27 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/23/08 18:23	Prep Date/Time: 10/21/08 10:00	Container ID:1085964006-B
Dilution Factor: 10		Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S6
SGS Ref. #: 1085964006
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.5

Collection Date/Time: 10/07/08 13:40
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Total Solids	84.5			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1085964006-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S7
SGS Ref. #: 1085964007
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 78.4

Collection Date/Time: 10/07/08 13:45
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	4290	356	71.2	mg/Kg	50	VFC9216	VXX18891	
Benzene	2490	1780	570	ug/Kg	50	VFC9216	VXX18891	
Toluene	85500	7120	2140	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	118000	7120	2140	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	243000	7120	2140	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	448000	7120	2140	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	13300	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	94.7	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 15:25
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:45

Initial Prep Wt./Vol.: 27.751 g
Prep Extract Vol.: 30.99 mL
Container ID: 1085964007-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 15:25
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:45

Initial Prep Wt./Vol.: 27.751 g
Prep Extract Vol.: 30.99 mL
Container ID: 1085964007-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S7
SGS Ref. #: 1085964007
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 78.4

Collection Date/Time: 10/07/08 13:45
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	19200	1270	127	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	48.9 J	101	10.1	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <sur>	85.5	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	87.7	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.185 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 21:54	Prep Date/Time: 10/21/08 10:00	Container ID:1085964007-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8295	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.185 g
Analytical Method: AK103	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/22/08 21:54	Prep Date/Time: 10/21/08 10:00	Container ID:1085964007-B
Dilution Factor: 4		Analyst: GL

Analytical Batch: XFC8298	Prep Batch: XXX20239	Initial Prep Wt./Vol.: 30.185 g
Analytical Method: AK102	Prep Method: SW3550C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 10/23/08 18:32	Prep Date/Time: 10/21/08 10:00	Container ID:1085964007-B
Dilution Factor: 50		Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S7
SGS Ref. #: 1085964007
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 78.4

Collection Date/Time: 10/07/08 13:45
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Total Solids	78.4			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID: 1085964007-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S8
SGS Ref. #: 1085964008
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.9

Collection Date/Time: 10/07/08 13:50
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	1740	241	48.3	mg/Kg	50	VFC9216	VXX18891	
Benzene	1520	1210	386	ug/Kg	50	VFC9216	VXX18891	
Toluene	58800	4830	1450	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	64100	4830	1450	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	144000	4830	1450	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	269000	4830	1450	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	7580	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	92.9	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 15:43
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:50

Initial Prep Wt./Vol.: 47.086 g
Prep Extract Vol.: 35.41 mL
Container ID:1085964008-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 15:43
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:50

Initial Prep Wt./Vol.: 47.086 g
Prep Extract Vol.: 35.41 mL
Container ID:1085964008-A
Analyst: HM

$$PPD = \frac{(4290 - 1740)}{[(4290 + 1740)/2]} \times 100 = \frac{2550}{3015} \times 100 = 84.58\%$$

$$DRO = \frac{(19,200 - 20,200)}{[(19,200 + 20,200)/2]} \times 100 = \frac{1000}{19,700} \times 100 = 0.5\% PPD$$

$$Benzene RPD = \frac{(2,490 - 1530)}{[(2,490 + 1530)/2]} \times 100 = \frac{960}{2005} \times 100 = 48.4\%$$



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S8
SGS Ref. #: 1085964008
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.9

Collection Date/Time: 10/07/08 13:50
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	20200	1280	128	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	61.7 J	102	10.2	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <sur>	102	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	83.7	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295 Analytical Method: AK102 Analysis Date/Time: 10/22/08 22:03 Dilution Factor: 4	Prep Batch: XXX20239 Prep Method: SW3550C Prep Date/Time: 10/21/08 10:00	Initial Prep Wt./Vol.: 30.099 g Prep Extract Vol.: 1 mL Container ID:1085964008-B Analyst: GL
Analytical Batch: XFC8295 Analytical Method: AK103 Analysis Date/Time: 10/22/08 22:03 Dilution Factor: 4	Prep Batch: XXX20239 Prep Method: SW3550C Prep Date/Time: 10/21/08 10:00	Initial Prep Wt./Vol.: 30.099 g Prep Extract Vol.: 1 mL Container ID:1085964008-B Analyst: GL
Analytical Batch: XFC8298 Analytical Method: AK102 Analysis Date/Time: 10/23/08 18:42 Dilution Factor: 50	Prep Batch: XXX20239 Prep Method: SW3550C Prep Date/Time: 10/21/08 10:00	Initial Prep Wt./Vol.: 30.099 g Prep Extract Vol.: 1 mL Container ID:1085964008-B Analyst: GL

P.P.D. =



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: **S8**
SGS Ref. #: 1085964008
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.9

Collection Date/Time: 10/07/08 13:50
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Total Solids	77.9			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1085964008-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S9
SGS Ref. #: 1085964009
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.8

Collection Date/Time: 10/07/08 13:55
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	1690	259	51.8	mg/Kg	50	VFC9216	VXX18891	
Benzene	1880	1300	415	ug/Kg	50	VFC9216	VXX18891	
Toluene	52200	5180	1550	ug/Kg	50	VFC9216	VXX18891	
Ethylbenzene	54200	5180	1550	ug/Kg	50	VFC9216	VXX18891	
o-Xylene	147000	5180	1550	ug/Kg	50	VFC9216	VXX18891	
P & M -Xylene	234000	5180	1550	ug/Kg	50	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	6720	* 50-150		%	50	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	93	80-120		%	50	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 16:01
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:55

Initial Prep Wt./Vol.: 42.826 g
Prep Extract Vol.: 34.52 mL
Container ID:1085964009-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 16:01
Dilution Factor: 50

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:55

Initial Prep Wt./Vol.: 42.826 g
Prep Extract Vol.: 34.52 mL
Container ID:1085964009-A
Analyst: HM



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: S9
SGS Ref. #: 1085964009
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.8

Collection Date/Time: 10/07/08 13:55
Receipt Date/Time: 10/09/08 08:50

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	27700	1280	128	mg/Kg	50	XFC8298	XXX20239	
Residual Range Organics	78.1 J	102	10.2	mg/Kg	4	XFC8295	XXX20239	
5a Androstane <sur>	72	50-150		%	4	XFC8295	XXX20239	
n-Triacontane-d62 <sur>	52.1	50-150		%	4	XFC8295	XXX20239	

Batch Information

Analytical Batch: XFC8295
Analytical Method: AK102
Analysis Date/Time: 10/22/08 22:13
Dilution Factor: 4

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.14 g
Prep Extract Vol.: 1 mL
Container ID:1085964009-B
Analyst: GL

Analytical Batch: XFC8295
Analytical Method: AK103
Analysis Date/Time: 10/22/08 22:13
Dilution Factor: 4

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.14 g
Prep Extract Vol.: 1 mL
Container ID:1085964009-B
Analyst: GL

Analytical Batch: XFC8298
Analytical Method: AK102
Analysis Date/Time: 10/23/08 18:51
Dilution Factor: 50

Prep Batch: XXX20239
Prep Method: SW3550C
Prep Date/Time: 10/21/08 10:00

Initial Prep Wt./Vol.: 30.14 g
Prep Extract Vol.: 1 mL
Container ID:1085964009-B
Analyst: GL



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: **S9**
SGS Ref. #: 1085964009
Project ID: Soils
Matrix: Soil/Solid (dry weight)
Percent Solids: 77.8

Collection Date/Time: 10/07/08 13:55
Receipt Date/Time: 10/09/08 08:50

Solids

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Total Solids	77.8			%	1	SPT7838		

Batch Information

Analytical Batch: SPT7838
Analytical Method: SM20 2540G
Analysis Date/Time: 10/17/08 18:30
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID: 1085964009-B
Analyst: STB



Travis/Peterson

Print Date: 11/3/2008

Client Sample ID: Trip Blank
SGS Ref. #: 1085964010
Project ID: Soils
Matrix: Solid/Soil (Wet Weight)

Collection Date/Time: 10/07/08 13:17
Receipt Date/Time: 10/09/08 08:50

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	0.581J	2.53	0.506	mg/Kg	1	VFC9216	VXX18891	
Benzene	ND	12.6	4.05	ug/Kg	1	VFC9216	VXX18891	
Toluene	ND	50.6	15.2	ug/Kg	1	VFC9216	VXX18891	
Ethylbenzene	ND	50.6	15.2	ug/Kg	1	VFC9216	VXX18891	
o-Xylene	ND	50.6	15.2	ug/Kg	1	VFC9216	VXX18891	
P & M -Xylene	ND	50.6	15.2	ug/Kg	1	VFC9216	VXX18891	
4-Bromofluorobenzene <sur>	94.3	50-150		%	1	VFC9216	VXX18891	
1,4-Difluorobenzene <sur>	92.3	80-120		%	1	VFC9216	VXX18891	

Batch Information

Analytical Batch: VFC9216
Analytical Method: AK101
Analysis Date/Time: 10/14/08 16:20
Dilution Factor: 1

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:17

Initial Prep Wt./Vol.: 49.413 g
Prep Extract Vol.: 25 mL
Container ID:1085964010-A
Analyst: HM

Analytical Batch: VFC9216
Analytical Method: SW8021B
Analysis Date/Time: 10/14/08 16:20
Dilution Factor: 1

Prep Batch: VXX18891
Prep Method: SW5035A
Prep Date/Time: 10/07/08 13:17

Initial Prep Wt./Vol.: 49.413 g
Prep Extract Vol.: 25 mL
Container ID:1085964010-A
Analyst: HM



SGS Ref.# 864823 Method Blank
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch VXX18888
Method SW5035A
Date 10/13/2008

QC results affect the following production samples:
1085964001, 1085964003, 1085964006

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<u>Volatile Fuels Department</u>					
Gasoline Range Organics	ND	2.50	0.500	mg/Kg	10/13/08
Surrogates					
4-Bromofluorobenzene <surr>	111	50-150		%	10/13/08
Batch	VFC9215				
Method	AK101				
Instrument	HP 5890 Series II PID+FID VCA				
Benzene	ND	12.5	4.00	ug/Kg	10/13/08
Toluene	ND	50.0	15.0	ug/Kg	10/13/08
Ethylbenzene	ND	50.0	15.0	ug/Kg	10/13/08
o-Xylene	ND	50.0	15.0	ug/Kg	10/13/08
P & M -Xylene	ND	50.0	15.0	ug/Kg	10/13/08
Surrogates					
1,4-Difluorobenzene <surr>	93.8	80-120		%	10/13/08
Batch	VFC9215				
Method	SW8021B				
Instrument	HP 5890 Series II PID+FID VCA				



SGS Ref.# 864891 Method Blank
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch VXX18891
Method SW5035A
Date 10/14/2008

QC results affect the following production samples:

1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009, 1085964010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<u>Volatile Fuels Department</u>					
Gasoline Range Organics	0.517J	2.50	0.500	mg/Kg	10/14/08
Surrogates					
4-Bromofluorobenzene <surr>	124	50-150		%	10/14/08
Batch	VFC9216				
Method	AK101				
Instrument	HP 5890 Series II PID+FID VCA				
Benzene	ND	12.5	4.00	ug/Kg	10/14/08
Toluene	ND	50.0	15.0	ug/Kg	10/14/08
Ethylbenzene	ND	50.0	15.0	ug/Kg	10/14/08
o-Xylene	ND	50.0	15.0	ug/Kg	10/14/08
P & M -Xylene	ND	50.0	15.0	ug/Kg	10/14/08
Surrogates					
1,4-Difluorobenzene <surr>	93.4	80-120		%	10/14/08
Batch	VFC9216				
Method	SW8021B				
Instrument	HP 5890 Series II PID+FID VCA				



SGS Ref.# 865488 Method Blank Printed Date/Time 11/03/2008 15:34
Client Name Travis/Peterson Prep Batch
Project Name/# Soils Method
Matrix Soil/Solid (dry weight) Date

QC results affect the following production samples:

1085964001, 1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Solids

Total Solids	100			%	10/17/08
Batch	SPT7838				
Method	SM20 2540G				
Instrument					



SGS Ref.# 865999 Method Blank
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch XXX20239
Method SW3550C
Date 10/21/2008

QC results affect the following production samples:

1085964001, 1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	3.74 J	20.0	2.00	mg/Kg	10/22/08
Surrogates					
5a Androstane <surrogate>	95.3	60-120		%	10/22/08
Batch	XFC8295				
Method	AK102				
Instrument	HP 5890 Series II FID SV D R				
Residual Range Organics	8.05 J	20.0	2.00	mg/Kg	10/22/08
Surrogates					
n-Triacontane-d62 <surrogate>	104	60-120		%	10/22/08
Batch	XFC8295				
Method	AK103				
Instrument	HP 5890 Series II FID SV D R				



SGS Ref.# 865489 Duplicate
Client Name Travis/Peterson
Project Name/# Soils
Original 1085964001
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch
Method
Date

QC results affect the following production samples:

1085964001, 1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
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Solids

Total Solids	80.8	80.6	%	0	(< 15)	10/17/2008
Batch	SPT7838					
Method	SM20 2540G					
Instrument						



SGS Ref.# 864824 Lab Control Sample
 864825 Lab Control Sample Duplicate
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch VXX18888
Method SW5035A
Date 10/13/2008

QC results affect the following production samples:

1085964001, 1085964003, 1085964006

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Fuels Department</u>							
Benzene	LCS	1280	102	(80-125)		1250 ug/Kg	10/13/2008
	LCSD	1280	102		0	(< 20)	1250 ug/Kg 10/13/2008
Toluene	LCS	1300	104	(85-120)		1250 ug/Kg	10/13/2008
	LCSD	1310	105		1	(< 20)	1250 ug/Kg 10/13/2008
Ethylbenzene	LCS	1330	106	(85-125)		1250 ug/Kg	10/13/2008
	LCSD	1340	107		1	(< 20)	1250 ug/Kg 10/13/2008
o-Xylene	LCS	1280	102	(85-125)		1250 ug/Kg	10/13/2008
	LCSD	1290	103		1	(< 20)	1250 ug/Kg 10/13/2008
P & M -Xylene	LCS	2750	110	(85-125)		2500 ug/Kg	10/13/2008
	LCSD	2770	111		1	(< 20)	2500 ug/Kg 10/13/2008
Surrogates							
1,4-Difluorobenzene <surr>	LCS		100	(80-120)			10/13/2008
	LCSD		100		0		10/13/2008

Batch VFC9215
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 864826 Lab Control Sample
864827 Lab Control Sample Duplicate
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch VXX18888
Method SW5035A
Date 10/13/2008

QC results affect the following production samples:

1085964001, 1085964003, 1085964006

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Fuels Department</u>							
Gasoline Range Organics	LCS	10.4	(60-120)	1	(< 20)	11.3 mg/Kg	10/13/2008
	LCSD	10.2					91
Surrogates							
4-Bromofluorobenzene <surr>	LCS	117	(50-150)	3			10/13/2008
	LCSD	114					114
Batch	VFC9215						
Method	AK101						
Instrument	HP 5890 Series II PID+FID VCA						



SGS Ref.# 864892 Lab Control Sample
 864893 Lab Control Sample Duplicate
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch VXX18891
Method SW5035A
Date 10/14/2008

QC results affect the following production samples:

1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009, 1085964010

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department							
Benzene	LCS 1260	101	(80-125)			1250 ug/Kg	10/14/2008
	LCSD 1270	101		1	(< 20)	1250 ug/Kg	10/14/2008
Toluene	LCS 1280	102	(85-120)			1250 ug/Kg	10/14/2008
	LCSD 1290	103		1	(< 20)	1250 ug/Kg	10/14/2008
Ethylbenzene	LCS 1320	105	(85-125)			1250 ug/Kg	10/14/2008
	LCSD 1330	107		1	(< 20)	1250 ug/Kg	10/14/2008
o-Xylene	LCS 1260	101	(85-125)			1250 ug/Kg	10/14/2008
	LCSD 1280	103		2	(< 20)	1250 ug/Kg	10/14/2008
P & M -Xylene	LCS 2720	109	(85-125)			2500 ug/Kg	10/14/2008
	LCSD 2760	110		2	(< 20)	2500 ug/Kg	10/14/2008
Surrogates							
1,4-Difluorobenzene <sur>	LCS	99	(80-120)				10/14/2008
	LCSD	99		0			10/14/2008

Batch VFC9216
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 864894 Lab Control Sample
864895 Lab Control Sample Duplicate
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch VXX18891
Method SW5035A
Date 10/14/2008

QC results affect the following production samples:

1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009, 1085964010

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Fuels Department

Gasoline Range Organics	LCS	10.9	97	(60-120)		11.3 mg/Kg	10/14/2008
	LCSD	11.0	97		1	(< 20)	11.3 mg/Kg 10/14/2008

Surrogates

4-Bromofluorobenzene <surr>	LCS		120	(50-150)			10/14/2008
	LCSD		118		1		10/14/2008

Batch VFC9216
Method AK101
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 866000 Lab Control Sample
866001 Lab Control Sample Duplicate
Client Name Travis/Peterson
Project Name/# Soils
Matrix Soil/Solid (dry weight)

Printed Date/Time 11/03/2008 15:34
Prep Batch XXXX20239
Method SW3550C
Date 10/21/2008

QC results affect the following production samples:

1085964001, 1085964002, 1085964003, 1085964004, 1085964005, 1085964006, 1085964007, 1085964008, 1085964009

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department							
Diesel Range Organics	LCS 113	68 *	(75-125)			167 mg/Kg	10/22/2008
	LCSD 174	104		42 *	(< 20)	167 mg/Kg	10/22/2008
Surrogates							
5a Androstane <surr>	LCS	65	(60-120)				10/22/2008
	LCSD	100		43			10/22/2008
Batch	XFC8295						
Method	AK102						
Instrument	HP 5890 Series II FID SV D R						
Residual Range Organics	LCS 110	66	(60-120)			167 mg/Kg	10/22/2008
	LCSD 168	101		42 *	(< 20)	167 mg/Kg	10/22/2008
Surrogates							
n-Triacontane-d62 <surr>	LCS	59 *	(60-120)				10/22/2008
	LCSD	90		42			10/22/2008
Batch	XFC8295						
Method	AK103						
Instrument	HP 5890 Series II FID SV D R						



1085964



CHAIN OF CUSTODY RECORD

IGS Environmental Services Inc.

- Locations Nationwide
- Alaska
 - Ohio
 - New Jersey
 - West Virginia
 - Hawaii
 - Maryland
 - North Carolina

www.usgs.com

080206

1 CLIENT: <u>Trevor Peterson Env. Consulting</u> CONTACT: <u>Eddie Packer</u> PHONE NO: <u>(907) 455-7225</u> PROJECT: _____ SITE/PWSID#: _____ REPORTS TO: <u>329 2nd Street Fairbanks</u> E-MAIL: _____ INVOICE TO: _____ QUOTE # _____ P.O. NUMBER _____					SGS Reference: _____		PAGE <u>1</u> OF <u>1</u>			
2 LAB NO. SAMPLE IDENTIFICATION DATE TIME MATRIX ① DAB S1 7/08/08 13:17 Soil ② H.B S2 13:20 ③ A.B S3 13:25 ④ D.B S4 13:30 ⑤ H.B S5 13:35 ⑥ A.B S6 13:40 ⑦ D.B S7 13:45 ⑧ A.B S8 13:50 ⑨ D.B S9 13:55	No CONTAINERS	SAMPLE TYPE Or COMP Or GRAB	Preservatives Used Analysis Required (3)	DRO / RAO BRO / BKEY	REMARKS HOT					
						3 Collected/Relinquished By: (1) <u>[Signature]</u> Date <u>7/08/08</u> Time <u>16:25</u> Received By: <u>[Signature]</u> Date <u>10/07/08</u> Time <u>11:05</u> Shipping Carrier: _____ Samples Received Cold? (Circle) YES NO Shipping Ticket No: _____ Temperature (C) <u>8.5</u> <u>13.4</u>				
						Relinquished By: (2) <u>[Signature]</u> Date <u>10/08/08</u> Time <u>11:30</u> Received By: _____ Date _____ Time _____ Special Deliverable Requirements: Chain of Custody Seal: (Circle) <u>INTACT</u> BROKEN ABSENT				
						Relinquished By: (3) _____ Date _____ Time _____ Received By: _____ Date _____ Time _____ Special Instructions: <u>INCLUDE CHROMATOGRAMS w/ Results please!</u>				
						Relinquished By: (4) _____ Date _____ Time _____ Received By: <u>[Signature]</u> Date <u>10/6/08</u> Time <u>08:50</u> Requested Turnaround Time: <input type="checkbox"/> RUSH <input checked="" type="checkbox"/> STD Date Needed _____				



SAMPLE RECEIPT FORM

SGS WO#:

Yes No NA

- Are samples RUSH, priority or w/in 72 hrs of hold time?
- If yes, have you done e-mail ALERT notification?
- Are samples within 24 hrs. of hold time or due date?
- If yes, have you also spoken with supervisor?
- Archiving bottles (if req'd): Are they properly marked?
- Are there any problems? PM Notified?
- Were samples preserved correctly and pH verified?

TAT (circle one): Standard or Rush

Received Date: 10/07/08

Received Time: 11075

Is date/time conversion necessary? NO

of hours to AK Local Time: N/A

Thermometer ID: EMK71D

Cooler ID	Temp Blank	Cooler Temp
1	3.4 °C	8.5 °C
	°C	°C
	°C	°C
	°C	°C
	°C	°C

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client /

Alert Courier / UPS / FedEx / USPS / DHL /

AA Goldstreak / NAC / ERA / PenAir / Carfile /

Lynden / SGS / Other: _____

Airbill # _____

Additional Sample Remarks: (if applicable)

Extra Sample Volume? _____

Limited Sample Volume? _____

MeOH field preserved for volatiles?

Field-filtered for dissolved _____

Lab-filtered for dissolved _____

Ref Lab required? _____

Foreign Soil? _____

This section must be filled if problems are found.

Yes No

Was client notified of problems? _____

Individual contacted: _____

Via: Phone / Fax / Email (circle one)

Date/Time: _____

Reason for contact: _____

Change Order Required? _____

SGS Contact: _____

This section must be filled out for DoD projects (USACE, Navy, AFCEE)

Was received temperature checked? _____

Exemptions: _____ Samples Analyzed: _____

Were all samples properly labeled? _____

Were all samples sealed in proper containers? _____

Were all samples packed to prevent leakage? _____

Were all samples fabricated and clearly labeled? _____

Were all samples sealed in proper plastic bags? _____

Were all VOC headspace vials MeOH preserved? _____

Were correct container sample sizes maintained? _____

Were all samples properly stored? _____

Was copy of COC, IRL, and custody seal provided to client? _____

Notes: client is aware of high cooler temperature and wants to proceed with analysis CB

10/07/08

Completed by (sign):

Carmon Beere (print): Carmon Beere

Login proof (check one): waived _____

required

performed by: Daniel [Signature]



SGS WO#:

1085964



SAMPLE RECEIPT FORM FOR TRANSFERS
From
FAIRBANKS, ALASKA OR HONOLULU, HAWAII
To
ANCHORAGE, AK

TO BE COMPLETED IN ANCHORAGE UPON ARRIVAL FROM FAIRBANKS OR HAWAII.
NOTES RECORDED BELOW ARE ACTIONS NEEDED UPON ARRIVAL IN ANCHORAGE.

Notes:

Receipt Date / Time: 10/1-08 0850
Is Sample Date/Time Conversion Necessary? Yes No [checked]
Number of Hours From Alaska Local Time: -
Foreign Soil? Yes No [checked]

Delivery method to Anchorage (circle all that apply):

Alert Courier / UPS / FedEx / USPS / AA Goldstreak / NAC / ERA / PenAir / Carlife / Lynden / SGS

Other:

Airbill #

COOLER AND TEMP BLANK READINGS*

Table with 6 columns: Cooler ID, Temp Blank (°C), Cooler (°C), Cooler ID, Temp Blank (°C), Cooler (°C). Row 1: 1, 1.6, 1.6, blank, blank, blank.

CUSTODY SEALS INTACT: YES / NO
/ WHERE: 2 / one on front, one on back

COMPLETED BY [Signature]

*Temperature readings include thermometer correction factors.

SGS

Environmental

CUSTODY SEAL

Signature: _____



Date/Time: _____

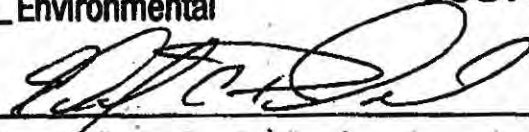
15:50 7 OCT 08

SGS

Environmental

CUSTODY SEAL

Signature: _____



Date/Time: _____

7 OCT 08 / 15⁵⁰

1085964

SGS Environmental

CUSTODY SEAL

W0459104

1085964

Signature:

Cannon Beene

Date/Time:

10/08/08 1645

SGS Environmental

CUSTODY SEAL

W0459104

Signature:

Cannon Beene

Date/Time:

10/08/08 1645

89D

COOLER 1.6

TB:1.5

