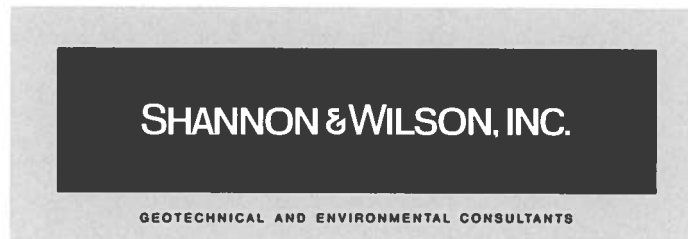


Groundwater Investigation  
Former Mark Air Warehouse  
Fairbanks International Airport, Alaska

January 2009

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Fairbanks International Airport  
6450 Airport Way, Suite 1  
Fairbanks, Alaska 99709

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By:  
Shannon & Wilson, Inc.  
2355 Hill Road  
Fairbanks, Alaska 99709-5326


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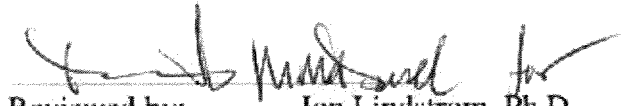
**FORMER MARK AIR WAREHOUSE GROUNDWATER INVESTIGATION  
FAIRBANKS INTERNATIONAL AIRPORT, ALASKA**

January 16, 2009

Prepared by:

SHANNON & WILSON, INC.  
2355 Hill Road  
Fairbanks, Alaska 99709-5326

  
Project Manager: Julie Keener  
Engineer

  
Reviewed by: Jon Lindstrom, Ph.D.  
Associate

Prepared for:

Alaska Department of Transportation & Public Facilities  
Fairbanks International Airport  
6450 Airport Way, Suite 1  
Fairbanks, Alaska 99709

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**GROUNDWATER INVESTIGATION  
FORMER MARK AIR WAREHOUSE  
FAIRBANKS INTERNATIONAL AIRPORT, ALASKA**

This report discusses the 2008 field activities we conducted at the former Mark Air warehouse facility, 5250 Airport Industrial Road, at the Fairbanks International Airport (FIA). This report summarizes our field activities, including soil boring and monitoring well installation, and provides the analytical results for the soil and groundwater samples we collected during this effort.

**1.0 BACKGROUND**

The subject site consists of Lots 6, 7, and 13 of Airport Block 10 (Figure 1); the State of Alaska is the property owner, and the property is managed by the Alaska Department of Transportation and Public Facilities (ADOT&PF). It is an Alaska Department of Environmental Conservation (ADEC) leaking underground storage tank (UST)-site with confirmed soil and groundwater contamination. MarkAir, Inc., was leasing the property and owned the USTs in 1992. Subsequent tenants included Weaver Brothers, Inc., and Alaska Mechanical, Inc. (AMI), the current tenant.

In 1992, Environmental Management, Inc. (EMI) closed six regulated USTs at the site by removal (Figure 1). Contaminated soil remained in place in some or all of the excavations. Between 1993 and 2005, various consultants performed groundwater monitoring and collected subsurface soil samples at the site.

SLR, Alaska (SLR) conducted a site investigation in 2004. They found benzene in a groundwater sample from monitoring well MW-8 at 3,860 micrograms per liter ( $\mu\text{g/L}$ ). The volatile organic compounds (VOCs) 1,2-dibromoethane (EDB) and 1,2-dichloroethane (EDC) were also detected above groundwater-cleanup levels in samples from MW-8 (Figure 1). Elevated levels of petroleum hydrocarbons were reported in soil samples collected near MW-8.

In 2006, Shannon & Wilson sampled four of the monitoring wells and performed a soil-gas study of the northern portion of the site. We installed 30 passive soil-gas collectors in a 50-foot grid pattern, and identified two potential "hot spots" of diesel range organics (DRO) and another of benzene, toluene, ethylbenzene, and xylenes (BTEX).

## 2.0 PROJECT OBJECTIVES AND SCOPE

The purpose of our 2008 field investigations was to further characterize the distribution of petroleum hydrocarbon groundwater contamination at the site, particularly between the subject site and downgradient lots TL-2321 and TL-2327 (Figure 1).

Our scope of services included installing several new groundwater-monitoring wells at and downgradient from the suspected contaminant source areas to evaluate the extent and distribution of soil and groundwater contamination. Our initial scope of services included:

- assessing the condition of and sampling the existing monitoring wells on the site;
- installing and sampling a groundwater-monitoring well in the BTEX hot spot identified by the soil-gas survey;
- sampling two soil borings at the DRO hot spots; and
- installing and sampling monitoring wells near the downgradient property line.

We provided our services in accordance with our Professional Services Agreement 368-5-1-065, our July 8, 2008, proposal, and subsequent addendum.

## 3.0 FIELD ACTIVITIES

Shannon & Wilson performed the field investigation in phases as described in the following sections.

### 3.1 Existing Monitoring Well Inventory and Sampling

On August 20<sup>th</sup> and 21<sup>st</sup>, 2008, Kristen Williams, a Shannon & Wilson environmental chemist, performed an inventory of the nine previously installed monitoring wells on the site (MW-1 through MW-9; Figure 1). She found the wells in satisfactory condition. Well MW-4 had apparently been inside an aboveground monument, which had been cut off and converted to a flush-mounted monument. She checked for floating fuel product in each well using a new, disposable bailer; she did not observe floating product. She trimmed the PVC well casings of wells MW-3, MW-4, MW-8, and MW-9.

Ms. Williams then purged and sampled the monitoring wells using our standard procedures. She treated the purge water using our activated-carbon filter prior to discharging it to the ground surface. She submitted groundwater samples from each well to SGS Environmental Services,

Inc. (SGS) for determination of gasoline range organics (GRO) by Alaska Method AK101, BTEX by Environmental Protection Agency (EPA) Method 8021B, DRO by Alaska Method AK102, and VOCs by EPA Method 8260B. Table 1 summarizes the results for the groundwater samples.

We evaluated the laboratory results from this sampling event and available data from previous investigations. After conferring with you, we agreed to the following modifications to our scope of services: sampling well point WP-3 (installed in 2004 by SLR); installing a monitoring well at the southern inferred "DRO hot spot;" drilling and sampling a soil boring at the inferred "BTEX hot spot;" and moving two of the proposed monitoring wells farther south along the property line.

### **3.2 Utility Locates and Building Permit**

Prior to the field activities, we located the underground utilities on the site and prepared a building permit application for the borings and new monitoring wells for FIA approval. We submitted the building permit application to FIA on August 21, 2008 and received approval on August 26<sup>th</sup>. The ADEC project manager approved our proposed scope of work and requested we field-screen soil samples at the groundwater interface from all the borings, sample the monitoring well downgradient of MW-8 for VOCs to measure EDB and EDC concentrations, and evaluate the historical groundwater results for trends.

### **3.3 Soil Sampling and Monitoring Well Installation**

On September 9<sup>th</sup> through 11<sup>th</sup>, 2008, Peter Grey, a Shannon & Wilson geologist, collected soil samples from soil borings for, and supervised the installation of, monitoring wells MW-10 through MW-16 (Figure 1) by Homestead Drilling Company (Homestead). Homestead drilled soil boring B and installed monitoring well MW-10 near the inferred DRO hot spots and drilled soil boring A near the inferred BTEX hot spot. Homestead installed a row of five monitoring wells (MW-11 through MW-15) 20 feet to 40 feet from the fence between the subject site and the adjacent property (a sewer main is located within the 20-foot-wide utility easement east of the property line). Lastly, Homestead installed MW-16 on the subject site (Lot 6) at a location inferred to be downgradient of Lot 5A, the former Texaco Bulk Plant site. Figure 1 shows the location of the newly installed monitoring wells and soil borings.

Homestead used a truck-mounted drill rig with a hollow-stem auger to advance the soil borings. They drilled borings A and B and MW-10 to 17.5 feet or 19 feet below the ground surface (bgs)

and collected split-spoon soil samples at 2.5-foot intervals for potential laboratory analysis. They drilled the borings for MW-11 through MW-16 to 17.5 feet; Mr. Grey collected grab samples from the soil cuttings at 2.5- to 5-foot-intervals, and collected split-spoon samples for potential laboratory analysis at the groundwater interface. He logged the borings and performed field screening with a MiniRae 2000 photoionization detector (PID) to estimate the relative concentration of VOCs.

PID results were less than one part per million (ppm) in Boring B, monitoring wells MW-11, MW-13, MW-14, and MW-15, and less than 5 ppm in MW-12 soils. PID results were elevated (i.e., greater than 20 ppm) in Boring A, MW-10, and MW-16 soils. He observed a sheen and hydrocarbon odor in Boring A, and hydrocarbon odor in MW-10 and MW-16 soil. The depth to groundwater ranged from 7.5 feet to 9.5 feet bgs. Based on observations and PID measurements, he submitted soil samples from Borings A and B, wells MW-10, MW-12, and MW-16 to SGS for determination of GRO (Alaska Method AK101), DRO (Alaska Method AK102), and VOCs (EPA Method 8260B).

Homestead constructed the new monitoring wells using 2-inch-diameter PVC casing and 0.020-inch slotted well screen. They placed the slotted interval from 7 feet to 17 feet bgs to span the zone of seasonal water table fluctuation. Homestead installed the wells inside flush-mounted monuments cemented in place.

We prepared soil-boring logs depicting Mr. Grey's observations of subsurface conditions. The boring logs also show the monitoring-well construction details and PID field screening results. Figure 1 shows the locations of the existing and new monitoring wells. The boring logs are presented in Appendix A (Figures A-1 through A-9).

The soil at MW-10 and Boring A had high PID readings, strong fuel odor, and a sheen. Drilling generated one full drum of soil cuttings from MW-10, and about one-quarter drum of cuttings from Boring A, plus a few gallons of decontamination water. We stored the drums on the site until we arranged for treatment and disposal.

Soil from MW-16 had slightly elevated PID readings and a fuel odor. Drilling generated about one-half drum of soil cuttings. Since PID results indicated hydrocarbons were present in the soil from MW-10, Boring A, and potentially from MW-16, Homestead placed the drill cuttings from the boring and two wells into 55-gallon drums which were temporarily stored on the property.



### 3.4 Monitoring Well Development and Sampling

Rodney Guritz, an environmental chemist with Shannon & Wilson, developed the new monitoring wells on September 18<sup>th</sup> using an air-powered diaphragm pump. He pumped and surged the wells until the water ran clear, and collected about 50 gallons of water from each well in drums to be temporarily stored at the site pending laboratory results. Groundwater from MW-10 exhibited a strong hydrocarbon odor, and groundwater from well point WP-3, and monitoring wells MW-12 and MW-16 exhibited a slight hydrocarbon odor. Mr. Guritz also noted a sulfurous odor when he was developing wells MW-12, MW-13, and WP-3.

Mr. Guritz sampled the new monitoring wells on September 19<sup>th</sup> and 22<sup>nd</sup>. After straightening the damaged monument, he was able to access well point WP-3 for sampling. He purged and sampled the wells and WP-3 using our standard methods, and treated the purge water using our activated-carbon filter prior to discharging it to the ground surface. He submitted the samples to SGS for DRO, GRO, and BTEX or VOC analysis by the methods noted above.

After receiving the groundwater results from the September 2008 sampling effort, we returned to the site on November 4<sup>th</sup> to resample MW-16 and confirm the September results.

### 3.5 Monitoring Well Survey

Stutzmann Engineering Associates (Stutzmann) surveyed the location and top-of-casing elevations of the new and existing monitoring wells on October 10<sup>th</sup>, 2008. Three of the monitoring wells (MW-10, MW-12, and MW-16) were not accessible, so Stutzmann was not able to measure the top-of-casing elevations. We measured the depth to groundwater in the monitoring wells on that date and calculated the groundwater elevations. The October 10<sup>th</sup> groundwater elevations in the monitoring wells varied by 0.42 feet across the site. Using the groundwater-elevation data, we determined the direction of groundwater flow at the site was generally to the northwest. The survey data are provided in Appendix B.

## 4.0 ANALYTICAL RESULTS

The SGS laboratory data reports for the soil and groundwater samples are included in Appendix C to this report, along with their associated ADEC Data Review Checklists. Our data-quality review of the laboratory results is provided in the following section of this report.

#### 4.1 Cleanup Levels

To evaluate soil analytical data, we compared the results to ADEC Method Two, Table B1 and B2 soil cleanup levels in 18 AAC 75.341 for the Under-40 Inch (mean annual precipitation) zone. We used the most stringent cleanup levels in the tables, which were generally for the migration-to-groundwater exposure pathway. To evaluate groundwater analytical data, we compared the results to ADEC groundwater-cleanup levels presented in 18 AAC 75.345 Table C. We present the soil- and groundwater-cleanup levels in our Table 1 and 2 for comparison.

#### 4.2 Soil Sample Results

Table 1 summarizes the fuels, BTEX, and VOC results of the soil samples from Borings A and B and monitoring wells MW-10, 12, and 16. DRO was detected above the laboratory practical quantitation limit (PQL) in soil samples from Boring A and MW-10; the estimated DRO concentration in MW-10 exceeded the ADEC soil-cleanup level. GRO was detected above the PQL in soil samples from Boring A and MW-10; Boring A GRO concentrations exceeded the soil-cleanup level. The GRO/DRO results, and detected BTEX analyte results are shown on Figure 2.

BTEX analytes were found above their PQLs in soil samples from Boring A, MW-10, and MW-16. Benzene concentrations exceeded the ADEC soil-cleanup level in the samples from Boring A and MW-10. Toluene, ethylbenzene, and xylenes concentrations in Boring A, and toluene and ethylbenzene concentrations in MW-10, also exceeded their soil-cleanup levels.

Of the 64 VOC analytes quantitated by EPA Method 8260B, seven VOC analytes were detected above their PQLs in the soil sample and duplicate from Boring A. No VOC analytes were detected above their PQLs in the soil sample from Boring B. The soil sample from monitoring well MW-10 contained five VOC analytes. The compound 1,2,4-trimethylbenzene exceeded its cleanup level in the sample and duplicate from Boring A. The PQLs for 1,2-dibromoethane (EDB) and 1,2-dichloroethane (EDC) were greater than their respective soil-cleanup levels; these analytes were not detected in any of the soil samples.

#### 4.3 Groundwater Sample Results

Table 2 summarizes the groundwater-sample results for fuels and BTEX for the previously installed monitoring wells and well point WP-3, and the new monitoring wells. Table 2 also includes the VOC results for those water samples on which the VOC analysis was performed. The GRO/DRO results and the detected VOC analyte results are shown on Figure 3.

DRO was detected in samples from wells MW-3, MW-8, MW-12, and MW-13, and were detected above the cleanup level in the samples from WP-3, MW-10, and MW-16. GRO was detected in samples from MW-12, and was detected above the cleanup level in the samples from monitoring wells MW-8, MW-10, and MW-16.

Benzene was detected above its PQL in samples from monitoring wells MW-4, MW-9, MW-13, and MW-15, and was detected above the cleanup level in the samples from MW-8, MW-10, MW-12, and MW-16. Toluene, ethylbenzene, and/or xylenes were detected in the samples from MW-4, MW-8, MW-10, MW-12, and MW-16. Toluene and ethylbenzene exceeded their groundwater-cleanup levels in the sample from MW-10.

The monitoring well samples contained a variety of alkylbenzenes, naphthalene, and four halogenated organics. EDB was detected in the sample from MW-10 above the cleanup level, and its PQL exceeded the cleanup level in the samples from MW-6, MW-7, MW-8, and MW-12. EDC was detected in MW-8 and MW-12 and was detected above the cleanup level in the duplicate sample from MW-8. The compounds dichlorodifluoromethane and trichlorofluoromethane were also detected in several wells (Table 2).

Resampling of well MW-16 in November 2008 confirmed the elevated benzene, DRO, and GRO concentrations in the original sampling event.

## 5.0 QUALITY ASSURANCE AND QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) procedures assist us in checking that our data quality is acceptable and reliable. We reviewed the analytical results for laboratory QC samples, and also conducted our own QA assessment for this project. We also reviewed the chain-of-custody records and laboratory sample-receipt forms to check that custody was not breached, sample holding times were met, and the samples were kept properly chilled (between 2 °C and 6 °C) during shipping. Our QA review procedures allowed us to document the 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 groundwater- and soil-sample data produced by SGS. The laboratory reports we reviewed were SGS work orders 1084936 (August 2008 groundwater samples), 1084993 (September 2008 soil-boring samples), 1085913 (September 2008 groundwater samples), 1085951 (a sample of investigation-derived waste [IDW] we collected

from a storage drum to determine the proper waste-disposal options), and 1085856 (November 2008 resample of MW-16). Each laboratory report contained a case narrative and forms documenting sample-receipt conditions. We present details about the results of our QA review below.

## 5.1 Sample Handling

We hand-delivered the samples to the SGS sample-receiving office in Fairbanks; the SGS staff re-packed and shipped the samples in coolers to their analytical laboratory in Anchorage. The laboratory-report case narratives indicated the samples arrived at the laboratory within the acceptable temperature range.

The sample-holding period for four soil-boring samples collected in September was exceeded by one day for the DRO analyses. The samples were obtained from the boring for monitoring well MW-10, and from Borings A and B; the DRO results from these soil samples should be considered biased low. No other sample-handling anomalies occurred, and the sample-holding times were met for the remaining analyses.

## 5.2 Analytical Sensitivity

The analyses of project samples had PQLs below the ADEC soil- and groundwater-cleanup levels for most of the analytes determined, with the exception of 1,2-dichloroethane and 1,2-dibromoethane in the soil-boring samples, and 1,2-dibromoethane in the groundwater samples. The 1,2-dichloroethane and 1,2-dibromoethane PQLs for the soil samples from MW-10, Boring A, Boring B, and the trip blank ranged from 0.0255 mg/kg to 0.811 mg/kg; the soil-cleanup level is 0.016 mg/kg for 1,2-dichloroethane and 0.00016 mg/kg for 1,2-dibromoethane. These analytes were not detected in any of the soil samples we collected for this project, but they may be present at concentrations between their soil-cleanup levels and the PQLs in these samples.

The 1,2-dibromoethane PQLs for the groundwater samples were 1.00 µg/L; the groundwater-cleanup level for this analyte is 0.05 µg/L. This analyte was detected in the sample from MW-10, but was not detected in the other groundwater samples analyzed for VOCs. In those samples where this analyte was not detected, it may be present at a concentration between the groundwater-cleanup level and the PQL.

We submitted trip blanks with water samples to be analyzed for VOCs and GRO to determine whether cross-contamination or contamination from an outside source may have occurred during

shipment or storage. No analytes were detected above their PQL in the trip blanks, indicating no cross-contamination or contamination from an outside source affected sample results.

Laboratory method blanks were analyzed in association with samples collected for this project to check for contributions to the analytical results possibly attributable to laboratory-based contamination. The method blank associated with the soil-boring samples contained detectable DRO, naphthalene, and benzene at estimated concentrations below their PQLs; the method blank associated with the August 2008 groundwater samples contained DRO at an estimated concentration below its PQL; and the method blanks associated with the November 2008 MW-16 groundwater sample contained benzene and DRO at estimated concentrations below their PQLs. When these analytes were detected in the associated samples, they were found at concentrations at least five-fold higher than the estimated method blank concentrations, and the sample results were unaffected.

### 5.3 Accuracy

The laboratory assessed the accuracy of their analytical procedure by analyzing laboratory control samples (LCSs) and LCS duplicates (LCSDs). These QC samples allow the laboratories to evaluate their ability to recover analytes added to clean solid or aqueous matrices. The LCSD recovery of dichlorodifluoromethane was biased low for the groundwater samples *MW-6*, *MW-7*, *MW-8*, *MW-80*, and the trip blank submitted in August 2008, and would generally be considered biased low. However, the initial calibration verification (ICV) analysis associated with this sample set recovered dichlorodifluoromethane above laboratory limits, indicating this analyte would be biased high in the associated samples. As a result of these conflicting biases, the dichlorodifluoromethane results for the groundwater samples collected in August 2008 should be considered estimates; this analyte was reported at concentrations ranging from below detection (i.e., less than 1 µg/L) to 2.24 µg/L in the August 2008 samples.

The ICV results for dichlorodifluoromethane were biased high in the analyses for the September 2008 water samples; the results for this analyte in these samples should also be considered biased high. Dichlorodifluoromethane was detected in monitoring-well samples MW-10, MW-12, and MW-21; concentrations in these samples ranged from 1.23 µg/L to 1.79 µg/L. The ADEC groundwater-cleanup level for dichlorodifluoromethane is 7,300 µg/L.

LCS and/or LCSD recoveries for a few analytes in the soil samples were above the laboratory's control limits, but the analytes were not detected in the associated samples and their results were unaffected.

The laboratory also evaluated analytical accuracy for each sample by assessing the recovery of analyte surrogates added to individual project samples. The GRO surrogate, 4-bromofluorobenzene, was recovered above the laboratory's control limit in the soil samples from monitoring well MW-10 and Boring A, and in the duplicate water samples from monitoring well MW-8; the laboratory report's case narrative noted the high surrogate recovery was due to hydrocarbon interference in those samples. The LCS and LCSD results associated with these samples were within limits, so the GRO results should be considered accurate, despite the high surrogate recoveries.

No other surrogate recovery anomalies occurred in the soil or groundwater sample sets.

The LCS-, LCSD-, and surrogate-recovery data indicate the sample analyses generally yielded accurate results, with the exception of the August 2008 groundwater samples (dichlorodifluoromethane concentrations in samples *MW-6*, *MW-7*, *MW-8*, *MW-80*, and the August 2008 trip blank should be considered estimates), and the September 2008 groundwater samples (dichlorodifluoromethane concentrations in samples *MW-10*, *MW-12*, and *MW-21* should be considered biased high).

#### 5.4 Precision

We collected field-duplicate samples at a frequency of 10 percent of the number of project samples to evaluate the precision of analytical measurements and the reproducibility of our sampling technique. To evaluate the precision of the data, we calculated the relative percent difference (RPD; difference between the sample and its duplicate divided by the mean of the two). RPD can be evaluated only if the results of the analyses for both the sample and its duplicate are above the PQLs.

The RPDs for field-duplicate groundwater samples (*MW-8/MW-80* and *MW-12/MW-21*) were within our QC goal of 30 percent. The RPDs for our duplicate soil samples (*1417-090908-002/1417-090908-003*; Boring A) also met our QC goal (50 percent), with the exception of the benzene (72 percent), toluene (55 percent), and n-butylbenzene (51 percent) results. Soil heterogeneity may explain the relatively high RPDs; we will accept the higher of the two soil results from these samples as being representative of site conditions at that location and sampling depth.

Laboratory analytical precision can also be evaluated by RPD calculations. The LCS and LCSDs provide information regarding the reproducibility of laboratory procedures, and are therefore a

measure of the laboratory's analytical precision. The LCS/LCSD RPDs were within QC goals and laboratory control limits for most of the analytes, with the exception of dichlorodifluoromethane in the August 2008 groundwater-sample analyses. This analytical imprecision affected samples *MW-6*, *MW-7*, *MW-8*, *MW-80*, and the August 2008 trip blank; these samples' results for dichlorodifluoromethane concentrations are considered estimates due to LCSD and ICV anomalies, as we noted above.

With the exception of the dichlorodifluoromethane results in groundwater samples *MW-6*, *MW-7*, *MW-8*, and *MW-80*, and the benzene, toluene, and n-butylbenzene results for the soil samples from Boring A, the RPD calculations indicate the results for our project samples are precise.

### 5.5 Data Quality Summary

By working in general accordance with our proposed scope of services, we consider the samples we collected to be representative of site conditions at the locations and times they were obtained. In our opinion, the overall quality and utility of the analytical data for this project was not compromised by analytical irregularities, but some data should be used with qualification:

- The DRO results for the soil samples from monitoring well MW-10 and Borings A and B should be considered biased low.
- The PQLs for 1,2-dichloroethane and 1,2-dibromoethane in the soil samples from MW-10, Boring A, Boring B, and the trip blank were above these analytes' ADEC soil-cleanup levels (0.016 and 0.00016 mg/kg). The PQLs for 1,2-dichloroethane and 1,2-dibromoethane ranged from 0.0255 mg/kg to 0.811 mg/kg in these samples, and these analytes were not detected. They may be present at concentrations between their soil-cleanup levels and the PQLs in these samples.
- The 1,2-dibromoethane PQLs for the groundwater samples were 1.00 µg/L, and the groundwater-cleanup level for this analyte is 0.05 µg/L. This analyte was detected in the sample from MW-10, but not in the other groundwater samples analyzed for VOCs. In those samples where this analyte was not detected, it may be present at a concentration between the groundwater-cleanup level and the PQL.
- Dichlorodifluoromethane concentrations in the August 2008 groundwater samples *MW-6*, *MW-7*, *MW-8*, *MW-80*, and the August 2008 trip blank should be considered estimates due to ICV, LCSD, and imprecision anomalies.

- The dichlorodifluoromethane concentrations in the September 2008 groundwater samples *MW-10*, *MW-12*, and *MW-21* should be considered biased high.
- The benzene, toluene, and n-butylbenzene results for the soil samples from Boring A are imprecise; the higher of the duplicate results for these analytes will be considered representative of site conditions at that location and sampling depth.

We provide the SGS laboratory reports and ADEC data-review checklists for the project samples in Appendix C to this report.

## 6.0 DISCUSSION

### 6.1 Subsurface Conditions

Except for Boring B and MW-16, the borings and monitoring wells were within AMI's asphalt-paved storage yard. Subsurface soils in the borings within the depth explored (17.5 feet to 19 feet bgs) were sandy gravel in the upper 4 feet to 6 feet (likely fill material from construction of the parking lot) underlain by silty sand to sandy silt, with occasional organic material. We measured the groundwater elevations (NAVD 1988 vertical datum) in the existing monitoring wells at 424.62 feet to 425.01 feet in August, and at 421.26 feet to 421.68 feet in October 2008. Elevated PID readings and hydrocarbon odors were present in Boring A and the borings for monitoring wells MW-10, and MW-16 at 5 feet bgs to the bottom of the borings. PID readings were highest in these borings in the sample intervals immediately above and below the water table. The soil in Boring B and the borings for monitoring wells MW-11, MW-13, MW-14, and MW-15 did not have elevated PID readings or exhibit a hydrocarbon odor.

Our field personnel observed a sulfur odor (sulfide) in a number of the wells. This is likely the product of bacterially mediated sulfate reduction, which indicates the microbial population is metabolizing organic matter (e.g., petroleum hydrocarbons) in the subsurface.

### 6.2 Investigation-Derived Wastes

We evaluated the soil sample results to determine whether the soil cuttings from Boring A, MW-10, and MW-16 could be treated as non-hazardous, petroleum-contaminated soil. The analytical laboratory results showed the soil sample (1417-090908-002) from Boring A contained 11.3 mg/kg benzene, but its duplicate sample (1417-090908-004) contained 5.33 mg/kg benzene. The Resource Conservation and Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure



(TCLP) regulatory level for benzene in soil is 0.5 mg/L (equivalent to 10 mg/kg), above which the soil could be considered a hazardous waste.

Mr. Guritz collected a sample of soil (1417-A4) from the drum of Boring A cuttings for GRO/BTEX analysis. Analytical results (SGS Work Order 1085951, Appendix C) for benzene were less than 10 mg/kg. The drum of soil cuttings from Boring A was therefore managed as RCRA-exempt, petroleum-contaminated soil. Analytical results from the drum of MW-10 cuttings indicated the soil would not exceed the regulatory level for benzene and therefore is not considered a hazardous waste. We contracted Emerald Alaska, Inc. (Emerald) to transport and treat the drums of contaminated soil cuttings from Boring A, MW-10, and MW-16.

We evaluated the groundwater results to determine if the development water would exceed the groundwater cleanup level and therefore require treatment. We treated the development water from monitoring well MW-10 with our carbon filter prior to discharge on the site. We discharged development water from monitoring wells MW-11, 13, 14, and 15 to the ground surface in an unpaved portion of the site. Due to schedule and cold-weather constraints, we contracted Emerald to treat the drums of development water from MW-12 and MW-16.

### 6.3 Soil and Groundwater Contamination

Residual soil contamination in and near the former UST and dispenser excavation area at the northwest corner of the warehouse building is the primary source of the groundwater contamination at this site. The USTs contained gasoline and diesel fuel, and a diesel aboveground storage tank was located near the dispenser island.

The hydrocarbon concentrations in soil and groundwater do not suggest the presence of free-phase product on the water table at the soil-boring or monitoring well locations. Except at MW-16, the nature of the soil and groundwater contamination we encountered in our soil borings and groundwater monitoring wells is consistent with releases from the former USTs. As one would expect, the contamination is characterized as weathered petroleum fuels with components in the diesel and gasoline range. The alkylbenzene analytes and naphthalene detected in the soil and groundwater samples are typically associated with fuel products. The detected halogenated VOCs have been previously reported in groundwater at the site.

Our field observations and PID measurements did not indicate soil contamination at monitoring wells MW-11, MW-13, MW-14, or MW-15 (Figure 2). We did not submit soil samples from these borings for laboratory analysis; it is possible there is soil contamination at these locations.

We used SLR's 2004 soil-sample results and our 2008 investigation results to evaluate the extent of soil contamination at the site.

PID results indicate contamination above cleanup levels may be present in the near-surface soils to at least the bottom of the boring (2.5 feet to 17 feet bgs) in Boring A and MW-10.

Soil contamination (i.e., above ADEC soil-cleanup levels) is present at least as far west as Boring A and MW-10, and was found at MW-8 and well points WP-1, WP-2, and WP-3 during SLR's 2004 investigation. Boring B marks the eastern extent of soil contamination from the former dispenser island; soil contamination may extend northeast of the former UST locations. Soil contamination does not appear to extend to MW-11, MW-12, or MW-13; SLR did not collect soil samples from MW-9 (Figure 2) in 2004. Based on the analytical results, we estimate the extent of subsurface-soil contamination by one or more analytes to be within an area of approximately 150 feet (in the northwest to southeast direction) by 100 feet to 150 feet (northeast to southwest).

Benzene was detected above the soil cleanup level in the boring for MW-16. PID readings were elevated from 5 feet bgs to the bottom of the boring, indicating possible soil contamination within that range. The extent of soil contamination in this area cannot be determined with the available information from our investigation.

The benzene groundwater plume is less than 200 feet wide at the transect of monitoring wells near the western property line, and is bound by MW-11 to the north and MW-13 to the south. The benzene plume extends from the former UST source area to at least MW-12, a distance of about 240 feet. Given the benzene concentration in MW-12 (113  $\mu\text{g/L}$ ), located about 20 feet from the fence, benzene concentrations above the 5- $\mu\text{g/L}$  ADEC groundwater-cleanup level likely cross the property line onto TL-2321 (Figure 3). The plumes of GRO, DRO, and other analytes, including EDB and EDC, appear to be smaller and do not extend to MW-12 near the property line.

The highest benzene groundwater concentration on the subject site was found in the sample from MW-16; resampling confirmed the elevated concentrations. The elevated benzene concentration points to an additional source area upgradient of MW-16. At the ADOT&PF FIA's request, we installed monitoring well MW-16 roughly downgradient from Lot 5A (Figure 3). The Texaco Bulk Plant was formerly located on this property, which is an ADEC contaminated site where the groundwater is sampled on a regular basis. According to the ADEC Contaminated Sites web page, the highest contaminant levels in 13 soil borings and six monitoring wells installed on that

site in 2004 were observed in boring MW-1. "MW-1 is near the property boundary along Airport Industrial Road. The FIA Fuel Hydrant pipeline runs approximately 15 feet to the southeast of MW-1 and could potentially be contributing to contamination at the site." The GRO (3.79 mg/L) and benzene (152 µg/L) concentrations in the 2006 samples from MW-1 exceeded the ADEC cleanup levels. These concentrations are lower than those found in our samples from MW-16.

Given the high DRO, GRO, and benzene concentrations at MW-16, groundwater contamination likely crosses the northwestern property line onto TL-2321 (Figure 3). The source and extent of DRO, GRO, and benzene groundwater contamination at MW-16 is not known. The benzene detected in groundwater at MW-15 may be related to the plume at MW-16. The source of the soil and groundwater contamination at MW-16 may be the former FIA fuel hydrant system, the former Texaco Bulk Plant, or another source.

The laboratory data-quality issues do not affect our evaluation of conditions at the site. The DRO soil concentrations reported in Boring A and MW-10 are biased low. Comparison of the reported concentrations to the respective cleanup levels indicates the bias would not likely change whether the result would be above or below the cleanup level.

Benzene is the primary contaminant of concern on the subject site since it exceeds the groundwater cleanup level near the property line in MW-12 and likely crosses the property boundary. Other contaminants above groundwater cleanup level are limited to the area of the subject site.

To address ADEC's concern about its presence, we analyzed selected soil and groundwater samples for EDB and EDC). EDB and EDC were not reported above their PQLs in the soil samples from Boring A and B and MW-10, but the PQLs were at least 1,500 and 15 times their respective soil cleanup levels. EDB was not reported in the groundwater samples from MW-6, MW-7, MW-8, and MW-12, but its PQL was 20 times the groundwater cleanup level. EDB was detected in MW-10 at an estimated 79.3 µg/L, which is above the groundwater cleanup level. EDC was reported in the sample and field duplicate from MW-8 at 4.92 µg/L and 5.12 µg/L, respectively. The latter value exceeds the EDC groundwater cleanup level. EDC was not detected in the samples from MW-6, MW-7, and MW-10, and was detected in the samples from MW-12 at concentrations less than the groundwater-cleanup level. The EDC cleanup level is 100 times that of EDB. EDB may be present at the other wells but the PQL was too high to measure it. Future groundwater monitoring should include analysis by EPA Method 504.1, 524.2, or 8011 to provide EDB PQLs less than the groundwater-cleanup level.

We evaluated the benzene concentration trends in the monitoring wells at the subject site. An evaluation of trends is only possible for those wells where at least four sampling events had occurred. The benzene concentration is decreasing in wells MW-3 and MW-8. The available benzene data do not exhibit a trend at wells MW-1, MW-2, MW-4, and MW-9. There are not sufficient data available to allow us to determine whether a trend is present at monitoring wells MW-5, MW-6, and MW-7, and at all the wells we installed at this site in 2008.

## 7.0 CONCLUSION AND RECOMMENDATIONS

Based on the findings of our 2008 investigation at the former Mark Air warehouse site, Shannon & Wilson concludes:

- diesel- and gasoline-range petroleum hydrocarbon subsurface-soil contamination is present at the UST source area;
- petroleum-hydrocarbon groundwater contamination (i.e., GRO and DRO) from the UST source area is limited to the area of the subject site;
- ~~the benzene plume from the UST source area likely crosses the western property line; and~~
- ~~groundwater contamination is present at MW-16 from another, as yet unknown, source.~~

We recommend continued groundwater monitoring at the subject site, at a minimum on a yearly basis, corresponding with seasonal high groundwater conditions. The goal of additional monitoring would be to accumulate sufficient data to allow us to assess contaminant-concentration trends where they are not now apparent. Aug/Sept

~~Obtaining seasonal groundwater elevation measurements would allow us to better define the groundwater-flow regime on the property, i.e., seasonal changes in groundwater gradient.~~ The apparent groundwater gradient at the time of our measurements for this study was to the north/northwest and of relatively low magnitude. Understanding how groundwater flow at the site varies seasonally will allow us to better define contaminant-source areas.

The ADOT&PF may consider ~~pursuing innovative remedial options for the source area~~ (including the area of MW-10 and Boring A) affecting groundwater quality at MW-12. Our field crew noted a strong odor of hydrogen sulfide while sampling some of the monitoring wells, which indicates there is ongoing microbiological activity in the contaminated aquifer. This

observation may point to opportunities for bioremediation of the petroleum-contaminated source areas.

We recommend an investigation to locate the source or sources of groundwater contamination found in the samples from monitoring well MW-16. This may require coordination with the consultant monitoring the former Texaco Bulk Plant site, so as not to duplicate efforts.

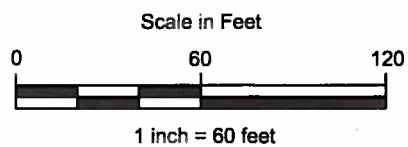
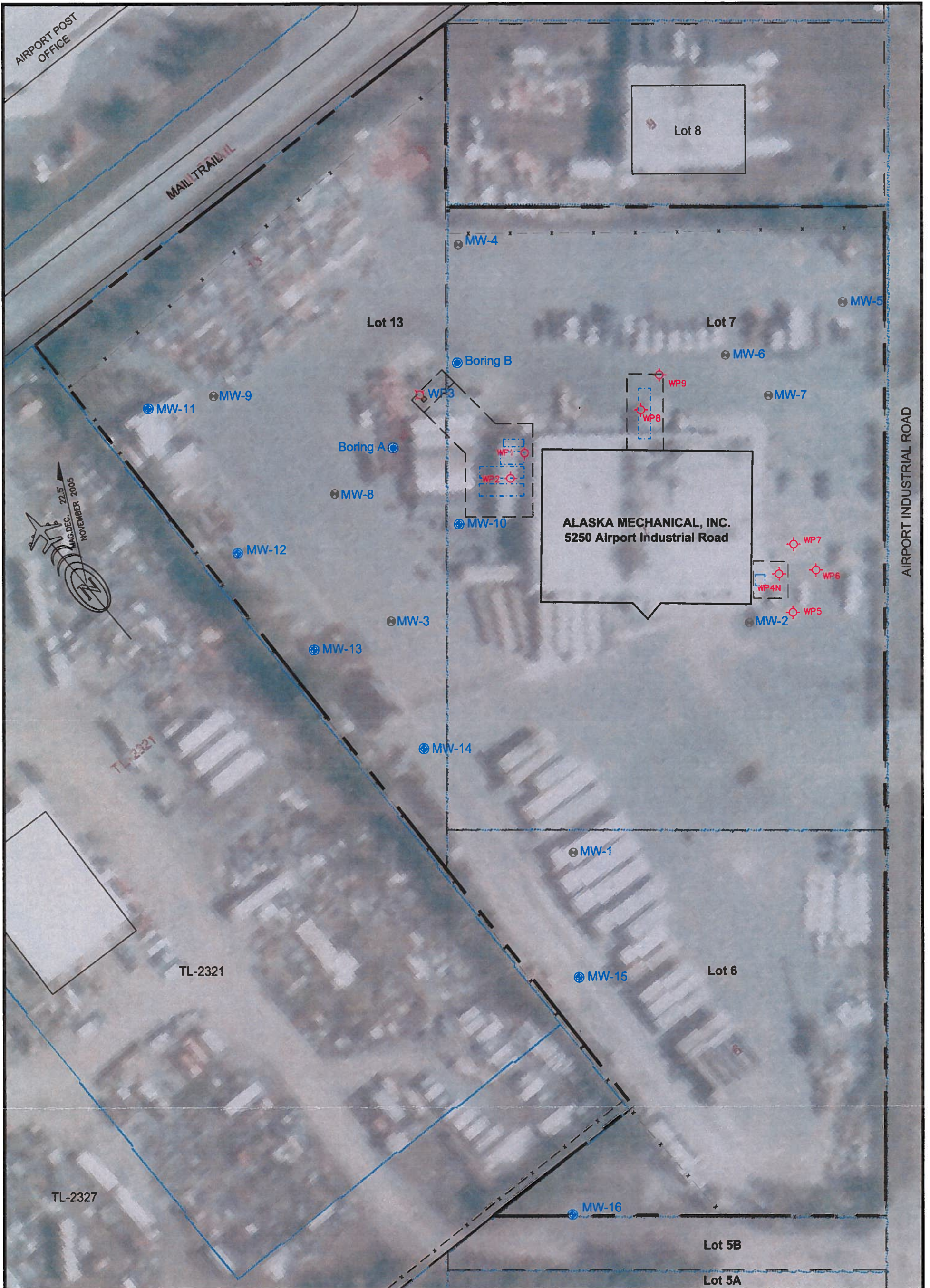
Shannon & Wilson recently performed a water-well search for the tenant of another contaminated property at the airport. We suggest reviewing available well-search results to identify wells at TL-2321/2327, and recommend sampling the water well or wells on that property.

A groundwater sample from MW-16 should be analyzed for VOCs, in the event groundwater samples from TL-2321/2327 contain VOC analytes. Analyzing samples from both MW-15 and MW-16 for VOCs may show whether those wells are affected by the same source.

## 8.0 LIMITATIONS

The data presented in this report are based on the sampling and analysis we performed; they should not be construed as a guarantee of the water or soil quality at the site. Our sampling was intended to confirm the presence or absence of selected contaminants at the sampled locations. It is possible our subsurface tests do not represent the highest levels of contamination. In addition, conclusions cannot be drawn on the presence or absence of contaminants for which laboratory analyses were not performed. As a result, the sampling and analysis performed can only provide you with our judgment as to the environmental characteristics of the site, and in no way guarantees an agency or its staff will reach the same conclusions.

Changes due to natural forces or human activity can occur on the site. The data presented in this report should be considered representative only of the time the data were collected. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised.



**Notes:**  
 Drawing source: ADOT FIA  
 Air photo source: FNSB GIS (2007 photo)

- Legend:**
- Former UST and former excavation
  - 2008 Monitoring Well
  - 2008 Soil Boring
  - Monitoring Well
  - 2004 Well Point

Former Mark Air Warehouse  
 5250 Airport Industrial Road  
 Fairbanks, Alaska

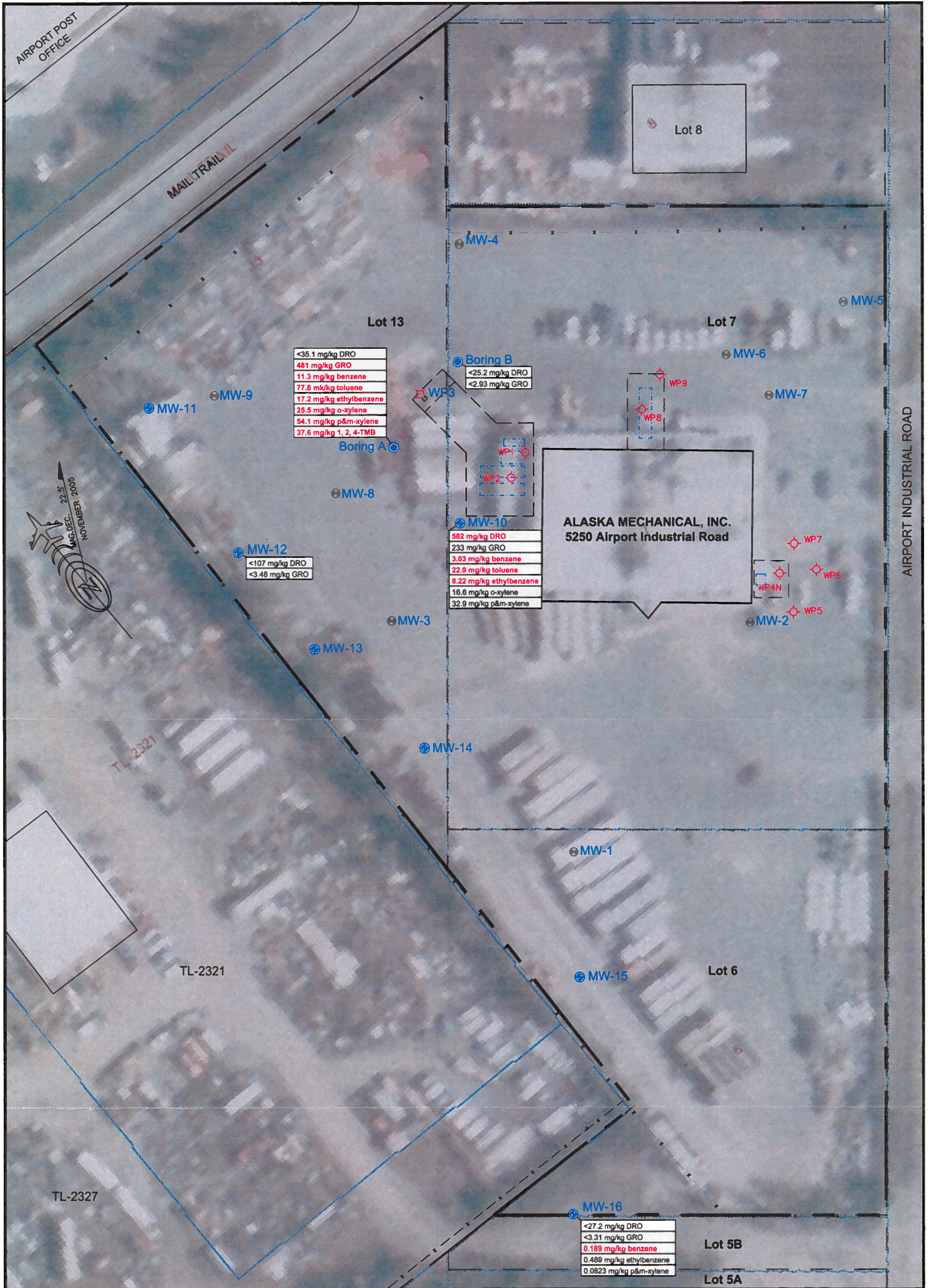
**Soil Boring and Monitoring Well Locations**

January 2009

31-1-11417-001

**SHANNON & WILSON, INC.**  
 Geotechnical and Environmental Consultants

**FIGURE 1**

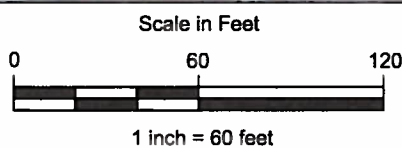


<35.1 mg/kg DRO
<b>481 mg/kg GRO</b>
<b>11.3 mg/kg benzene</b>
<b>77.8 mg/kg toluene</b>
<b>17.2 mg/kg ethylbenzene</b>
<b>25.5 mg/kg o-xylene</b>
<b>54.1 mg/kg p&amp;m-xylene</b>
<b>37.6 mg/kg 1, 2, 4-TMB</b>

<25.2 mg/kg DRO
<2.93 mg/kg GRO

<b>582 mg/kg DRO</b>
<b>233 mg/kg GRO</b>
<b>3.03 mg/kg benzene</b>
<b>22.9 mg/kg toluene</b>
<b>8.22 mg/kg ethylbenzene</b>
<b>16.6 mg/kg o-xylene</b>
<b>32.9 mg/kg p&amp;m-xylene</b>

<27.2 mg/kg DRO
<3.31 mg/kg GRO
<b>0.189 mg/kg benzene</b>
0.489 mg/kg ethylbenzene
0.0823 mg/kg p&m-xylene

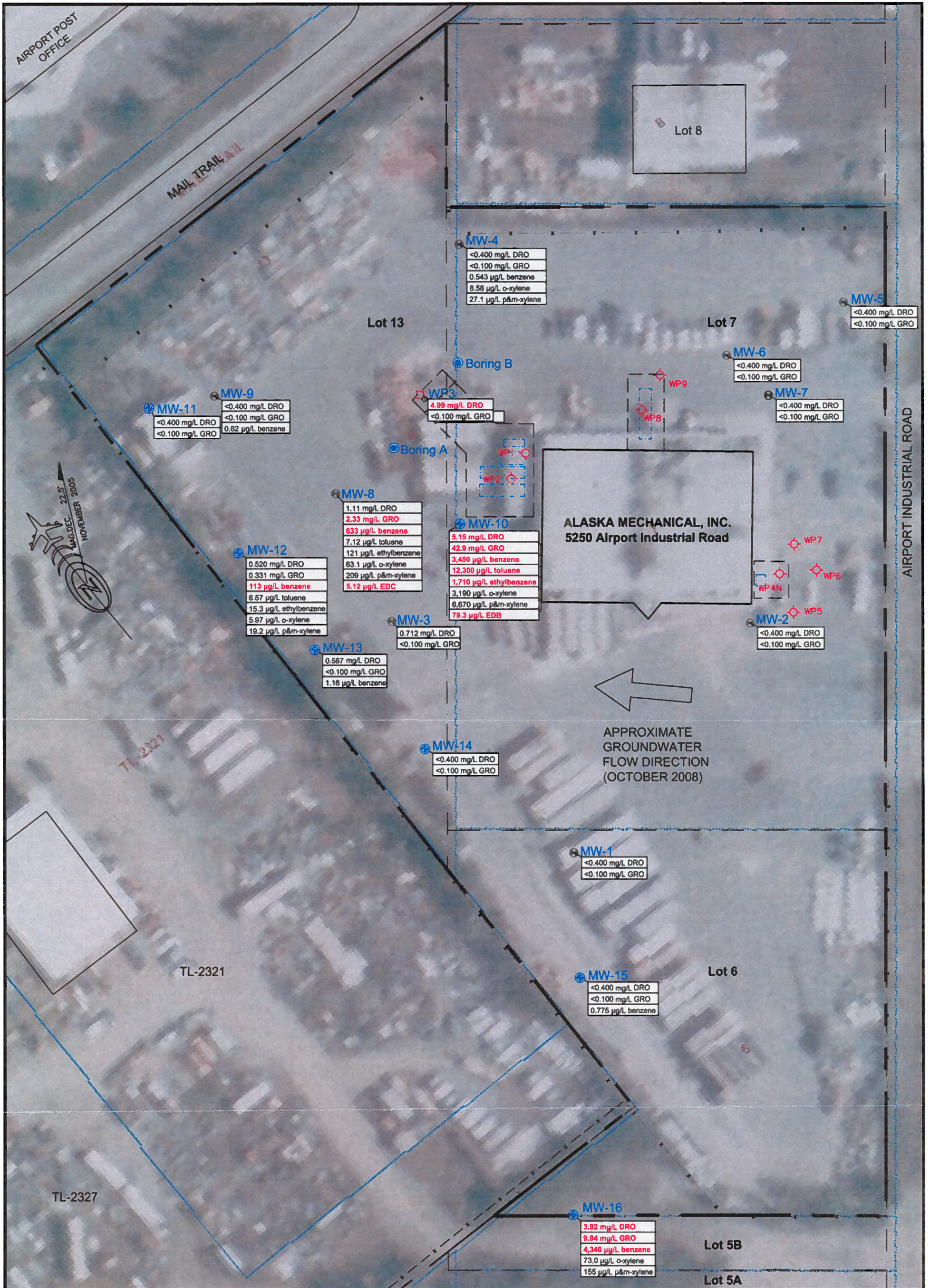


**Notes:**  
 Only detected BTEX analytes and VOC analytes detected above cleanup levels are shown.  
 Results above cleanup levels shown in **BOLD RED**.

Drawing source: ADOT FIA  
 Air photo source: FNSB GIS (2007 photo)

- Legend:**
- Former UST and former excavation
  - 2008 Monitoring Well
  - 2008 Soil Boring
  - Monitoring Well
  - 2004 Well Point

Former Mark Air Warehouse 5250 Airport Industrial Road Fairbanks, Alaska	
<b>2008 Soil Boring Results</b>	
January 2009	31-1-11417-001
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	<b>FIGURE 2</b>



**MW-4**

<0.400 mg/L DRO
<0.100 mg/L GRO
0.543 µg/L benzene
8.58 µg/L o-xylene
27.1 µg/L p&m-xylene

**MW-5**

<0.400 mg/L DRO
<0.100 mg/L GRO

**MW-6**

<0.400 mg/L DRO
<0.100 mg/L GRO

**MW-7**

<0.400 mg/L DRO
<0.100 mg/L GRO

**MW-9**

<0.400 mg/L DRO
<0.100 mg/L GRO
0.62 µg/L benzene

**WP3**

4.99 mg/L DRO
<0.100 mg/L GRO

**MW-8**

1.11 mg/L DRO
2.33 mg/L GRO
633 µg/L benzene
7.12 µg/L toluene
121 µg/L ethylbenzene
63.1 µg/L o-xylene
209 µg/L p&m-xylene
5.12 µg/L EDC

**MW-10**

5.15 mg/L DRO
42.9 mg/L GRO
3,450 µg/L benzene
12,300 µg/L toluene
1,710 µg/L ethylbenzene
3,190 µg/L o-xylene
6,670 µg/L p&m-xylene
79.3 µg/L EDB

**MW-12**

0.520 mg/L DRO
0.331 mg/L GRO
113 µg/L benzene
6.57 µg/L toluene
15.3 µg/L ethylbenzene
5.97 µg/L o-xylene
19.2 µg/L p&m-xylene

**MW-3**

0.712 mg/L DRO
<0.100 mg/L GRO

**MW-13**

0.587 mg/L DRO
<0.100 mg/L GRO
1.16 µg/L benzene

**MW-14**

<0.400 mg/L DRO
<0.100 mg/L GRO

**MW-2**

<0.400 mg/L DRO
<0.100 mg/L GRO

**MW-1**

<0.400 mg/L DRO
<0.100 mg/L GRO

**MW-15**

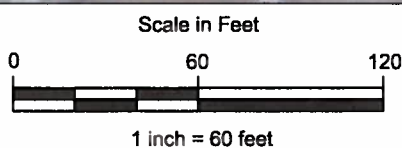
<0.400 mg/L DRO
<0.100 mg/L GRO
0.775 µg/L benzene

**MW-16**

3.92 mg/L DRO
9.94 mg/L GRO
4,340 µg/L benzene
73.0 µg/L o-xylene
155 µg/L p&m-xylene



APPROXIMATE  
GROUNDWATER  
FLOW DIRECTION  
(OCTOBER 2008)



**Notes:**  
Only detected BTEX analytes and VOC analytes detected above cleanup levels are shown.  
Results above cleanup levels shown in **BOLD RED**.

Drawing source: ADOT FIA  
Air photo source: FNSB GIS (2007 photo)

- Legend:**
- Former UST and former excavation
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  - 2008 Soil Boring
  - ⊕ Monitoring Well
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Former Mark Air Warehouse 5250 Airport Industrial Road Fairbanks, Alaska	
<b>2008 Monitoring Well Results</b>	
January 2009	31-1-11417-001
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	<b>FIGURE 3</b>



TABLE 1  
SUMMARY OF 2008 SOIL BORING RESULTS  
FORMER MARK AIR WAREHOUSE, FAIRBANKS INTERNATIONAL AIRPORT  
(all concentrations in mg/kg)

Sample Number	Sample Location	Sample Depth (ft bgs)	Whole Fuels		BTEX (EPA 8021B or 8260B)				VOCs (EPA 8260B) <sup>1</sup>													
			DRO (AK102)	GRO (AK101)	Benzene	Toluene	Ethylbenzene	o-Xylene	p & m-Xylene	n-Butylbenzene	sec-Butylbenzene	n-Propylbenzene	Isopropylbenzene	4-Isopropyltoluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthalene	1,2-Dibromoethane	1,2-Dichloroethane	Dichlorodifluoromethane	Trichlorofluoromethane	
1417-090908-002	Boring A	10.0 - 11.5	33.7 JL	481	11.3	77.8	17.2	25.5	54.1	1.29	0.925	6.30	2.38	<0.593	33.5	9.98	9.36	<0.593	<0.811	<0.593	<1.19	<1.19
1417-090908-004	Boring A	10.0 - 11.5	35.1 JL	440	5.33	44.1	13.9	19.9	45.3	2.17	1.28	7.07	2.54	<0.811	37.6	11.3	7.90	<0.0293	<0.811	<0.0293	<1.62	<1.62
1417-090908-003	Boring B	10.0 - 11.5	<25.2 JL	<2.93	<0.0176	<0.0586	<0.0293	<0.0586	<0.0586	<0.0293	<0.0293	<0.0293	<0.0293	<0.0293	<0.0293	<0.0293	<0.0586	<0.0293	<0.811	<0.0293	<0.0586	<0.0586
1417-090908-001	MW-10	10.0 - 11.5	582 JL	233	3.03	22.9	8.22	16.6	32.9	0.755	<0.0255	<0.0255	<0.0255	0.424	20.1	5.18	6.97	<0.0255	<0.0255	<0.0255	<0.0510	<0.0510
1417-091108-005	MW-12	9.0 - 10.5	<107	<3.48	<0.0174	<0.0696	<0.0696	<0.0696	<0.0696	—	—	—	—	—	—	—	—	—	—	—	—	—
1417-091108-006	MW-16	7.5 - 9.0	<27.2	<3.31	0.189	<0.0662	0.489	<0.0662	0.0823	—	—	—	—	—	—	—	—	—	—	—	—	—
Soil-Cleanup Level			250	300	0.025	6.5	6.9	63 (total)	15	12	15	51	23	23	23	20	0.00016	0.016	1.40	1.40	86	86

Notes:

- mg/kg milligrams per kilogram
- < Analyte not reported above specified laboratory practical quantitation limit (PQL)
- bold** Concentration (or PQL) exceeds ADEC Method 2 soil-cleanup level (most stringent exposure pathway)
- \* Only 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC); and VOCs reported above PQLs are presented in this table.
- Analysis not performed or cleanup level not established

Data Flag:

- JL Result biased low due to sample holding time exceedance

TABLE 2  
SUMMARY OF 2008 MONITORING WELL RESULTS  
FORMER MARK AIR WAREHOUSE, FAIRBANKS INTERNATIONAL AIRPORT

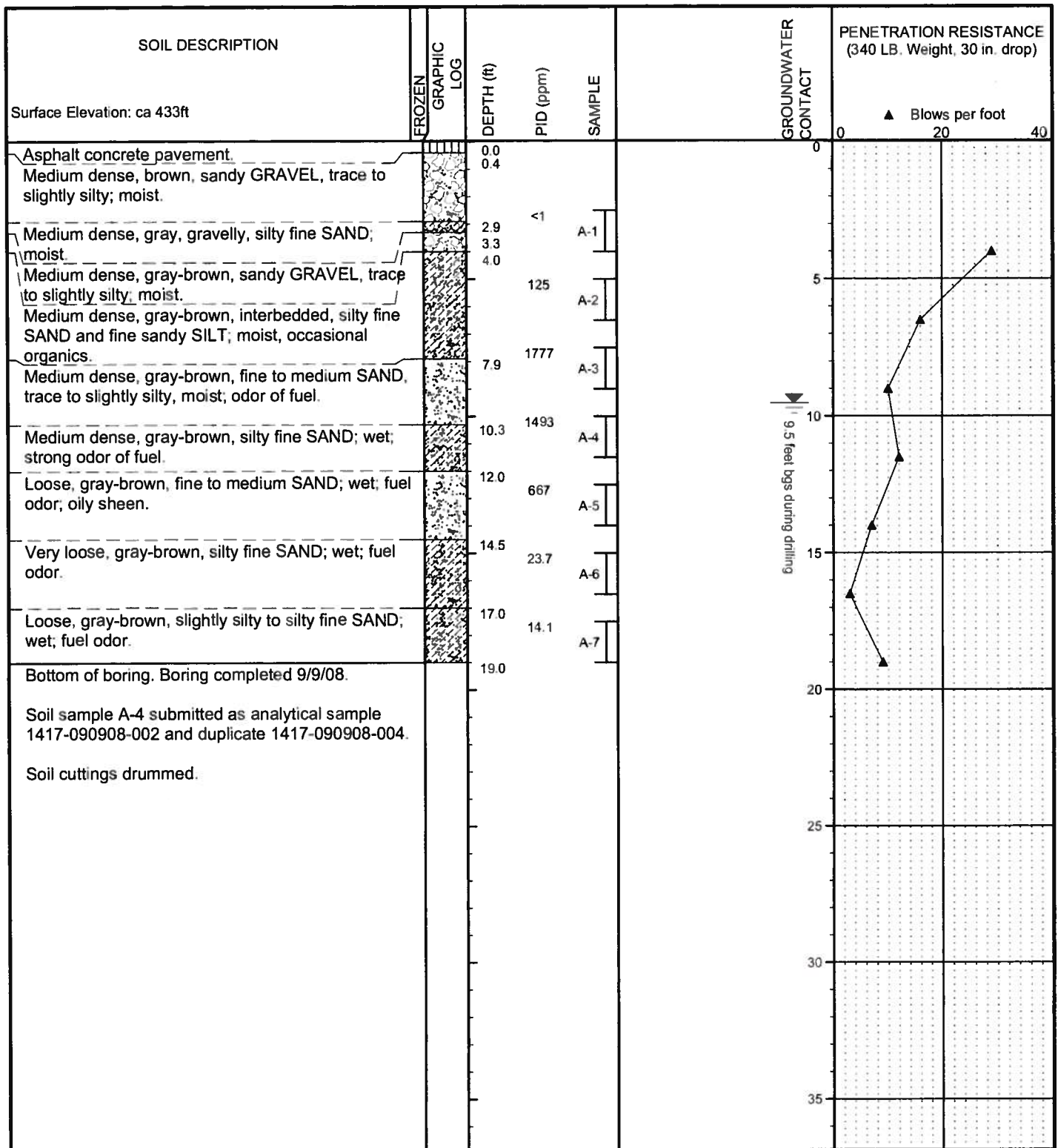
Sample Date	Sample Location	Whole Fuels (mg/L)		BTEX (µg/L, EPA 8021B or 8260B)				VOCs (µg/L, EPA 8260B) <sup>3</sup>																
		DRO (AK102)	GRO (AK101)	Benzene	Toluene	Ethylbenzene	o-Xylene	p & m-Xylene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	n-Propylbenzene	Isopropylbenzene	Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Naphthalene	Dibromoethane	1,2-Dichloroethane	Dichloromethane	Trichlorofluoromethane		
Aug. 2008	MW-1	<0.400	<0.100	<0.500	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-2	<0.400	<0.100	<0.500	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-3	0.712	<0.100	<0.500	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-4	<0.400	<0.100	0.543	<2.00	<2.00	8.58	27.1	<2.00	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-5	<0.400	<0.100	<0.500	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-6	<0.400	<0.100	<0.400	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-7	0.95	2.33	594	6.37	108	47.8	188	2.06	1.65	1.65	21.3	15.3	75.4	15.9	3.41	29.9	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-8	1.11	2.29	633	7.12	121	63.1	209	2.59	1.81	1.81	22.8	16.3	80.8	17.7	3.64	33.9	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
	MW-9	<0.400	<0.100	0.62	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00
Sept. 2008	MW-10	5.15	42.9	3,450	12,300	1,710	3,190	6,670	47.8	24.8	6.54	220	124	1,790	535	64.0	568	79.3 J	<0.500	<0.500	1.23 JH	<1.00	<1.00	
	MW-11	<0.400	<0.100	<0.500	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00	
	MW-12	0.520	0.321	109	6.57	15.3	5.97	19.2	<1.00	<1.00	<1.00	3.86	4.69	13.8	6.05	2.47	8.04	<1.00	<1.00	1.68	1.79 JH	<1.00	<1.00	
	MW-13	0.446	0.331	113	1.25	14.8	4.23	16.3	<1.00	<1.00	<1.00	4.13	4.47	12.9	4.29	1.96	<2.00	<1.00	<1.00	1.70	1.74 JH	<1.00	<1.00	
	MW-14	<0.400	<0.100	1.16	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
	MW-15	<0.400	<0.100	0.775	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
Nov. 2008	MW-16	3.92	9.94	4,340	<40.0	<40.0	73.0	155	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
	WP-3	4.99	<0.100	<0.500	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
Groundwater-Cleanup Level		1.5	2.2	5	1,000	700	10,000 (Total)	370	370	370	370	3,700	1,800	1,800	1,800	730	0.05	5	7,300	11,000				

Notes:  
mg/L milligrams per liter  
µg/L micrograms per liter  
< Analyte not reported above specified laboratory practical quantitation limit (PQL)  
**bold** Concentration exceeds ADEC groundwater-cleanup level  
\* Only VOCs reported above PQLs are presented in this table.  
— Analysis not performed or cleanup level not established

Data Flags:  
J Estimated concentration  
JH Result biased high

**APPENDIX A**

***Soil Boring and Monitoring Well Logs (Figures A-1 through A-9)***



- Legend**
- Asphalt Concrete
  - Sandy gravel/gravelly sand
  - Silt, sand and gravel
  - Silty sand/sandy silt
  - Sand
  - Water table at boring completion
  - 3 in. O.D. Split Spoon Sample
- Frozen Ground** { }

Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

---

**LOG OF BORING A**

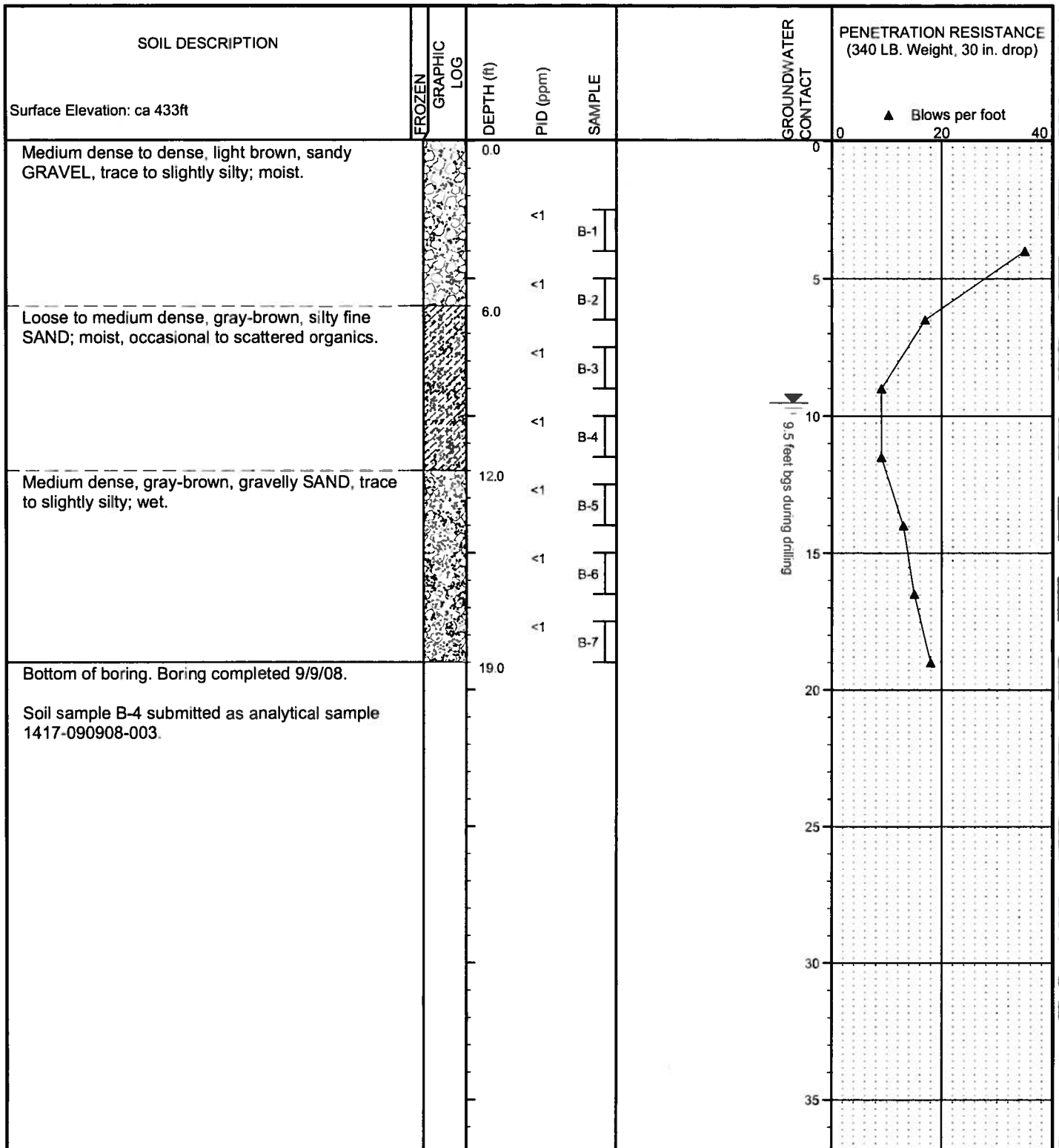
---

January 2009 31-1-11417-001

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**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-1  
Sheet 1 of 1



- Legend**
- Asphalt Concrete
  - Sandy gravel/gravelly sand
  - Silt, sand and gravel
  - Silty sand/sandy silt
  - Sand
  - Water table at boring completion
  - 3 in. O.D. Split Spoon Sample

Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

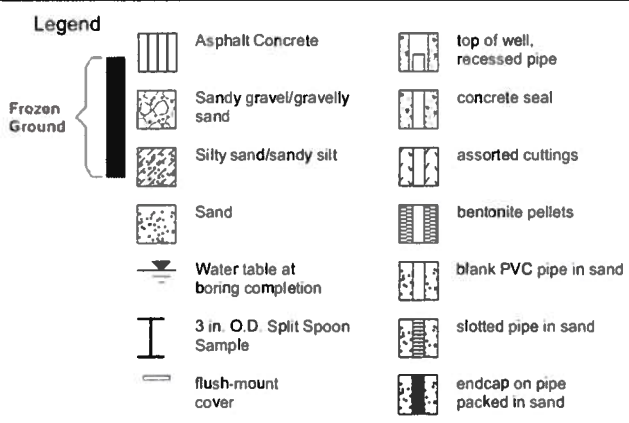
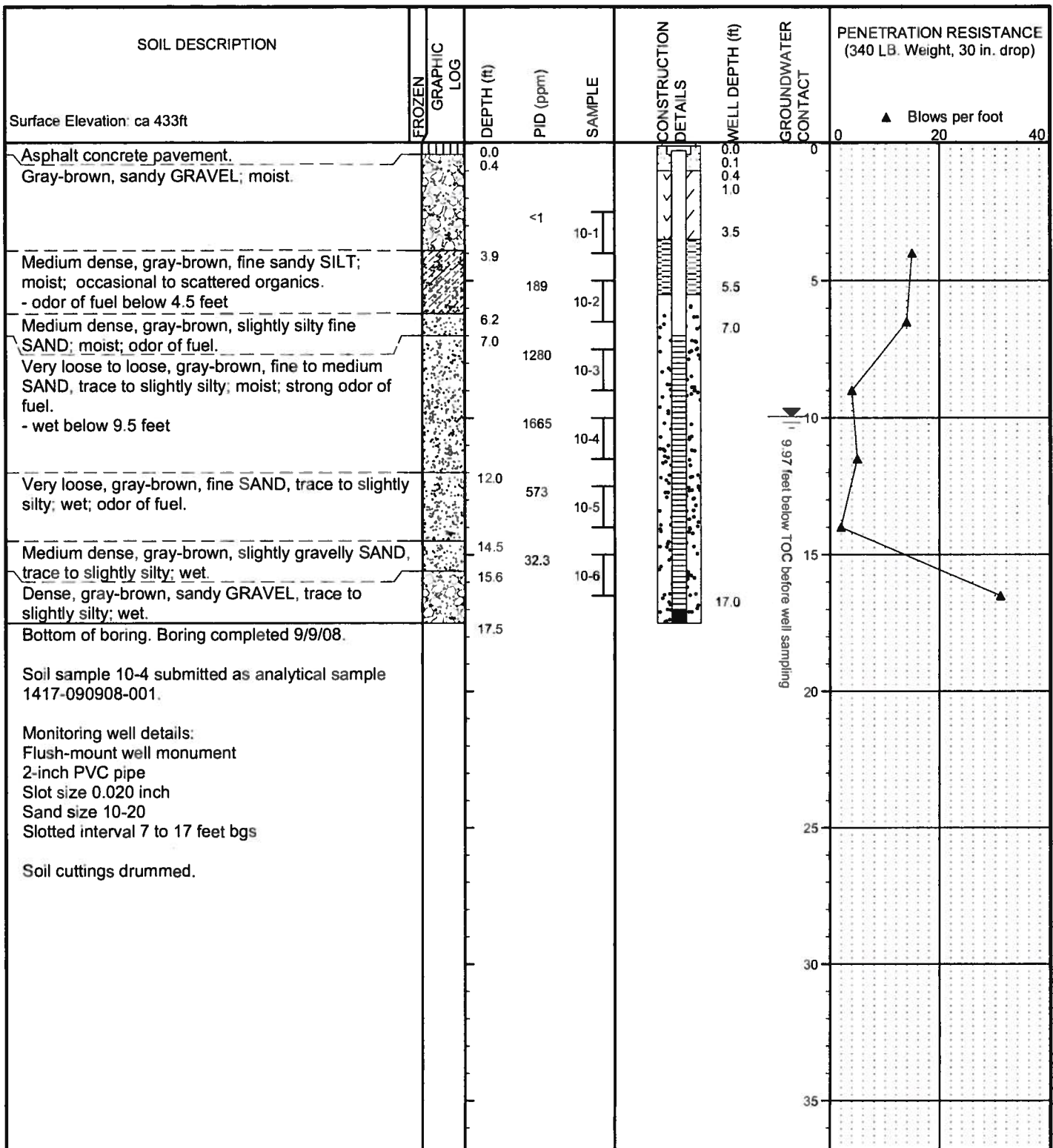
**LOG OF BORING B**

January 2009 31-1-11417-001

SHANNON & WILSON, INC.  
GEO-TECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-2

Sheet 1 of 1



Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

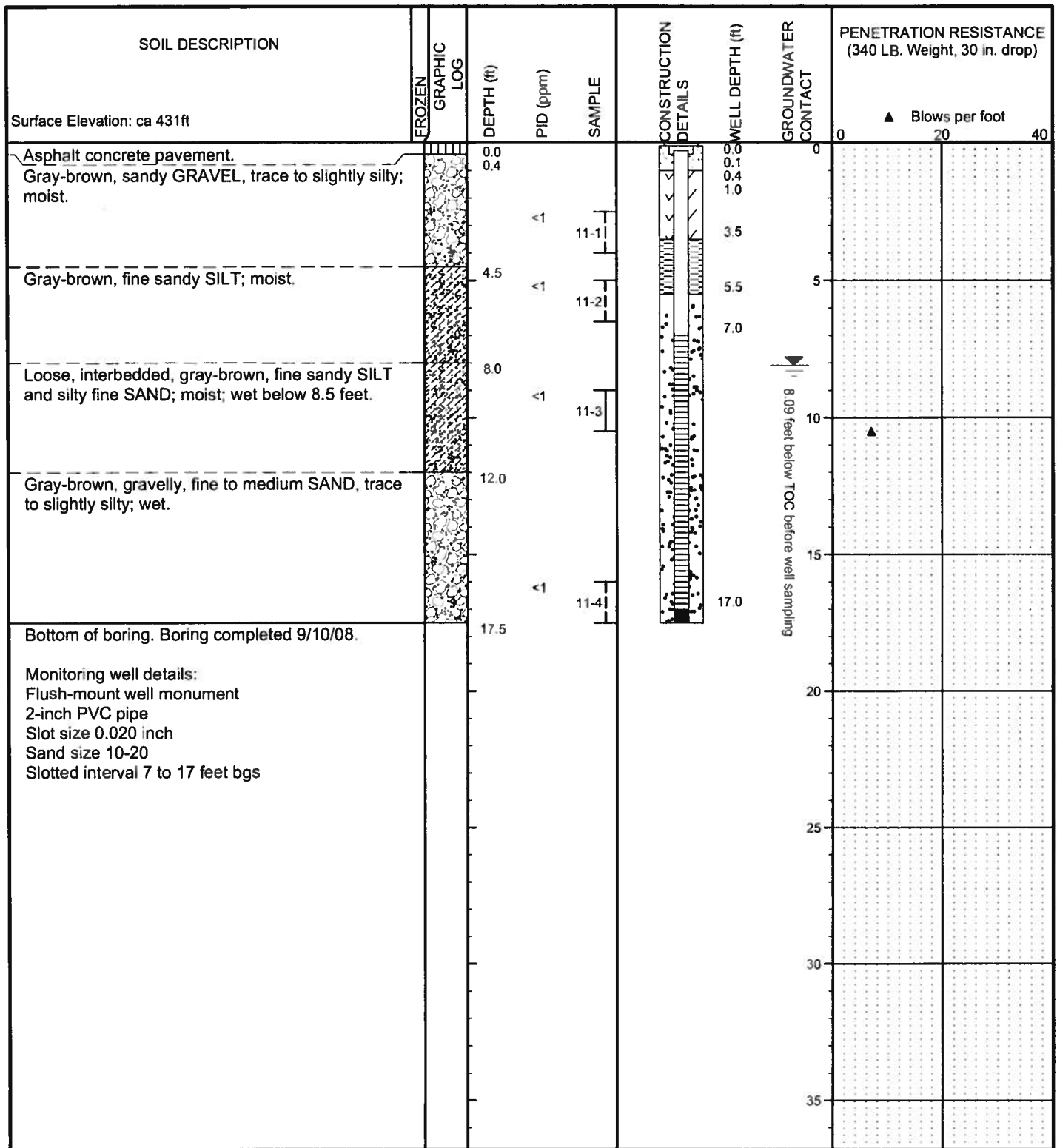
---

**LOG OF MONITORING WELL MW-10**

January 2009 31-1-11417-001

**SHANNON & WILSON, INC.**  
GEO-TECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-3  
Sheet 1 of 1



Legend	
	Asphalt Concrete
	Sandy gravel/gravelly sand
	Silty sand/sandy silt
	Sand
	Water table at boring completion
	3 in. O.D. Split Spoon Sample
	Grab Sample
	Frozen Ground
	flush-mount cover
	top of well, recessed pipe
	concrete seal
	assorted cuttings
	bentonite pellets
	blank PVC pipe in sand
	slotted pipe in sand

Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

**LOG OF MONITORING WELL MW-11**

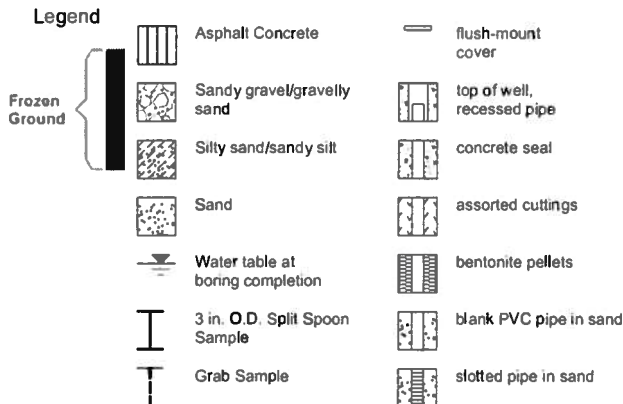
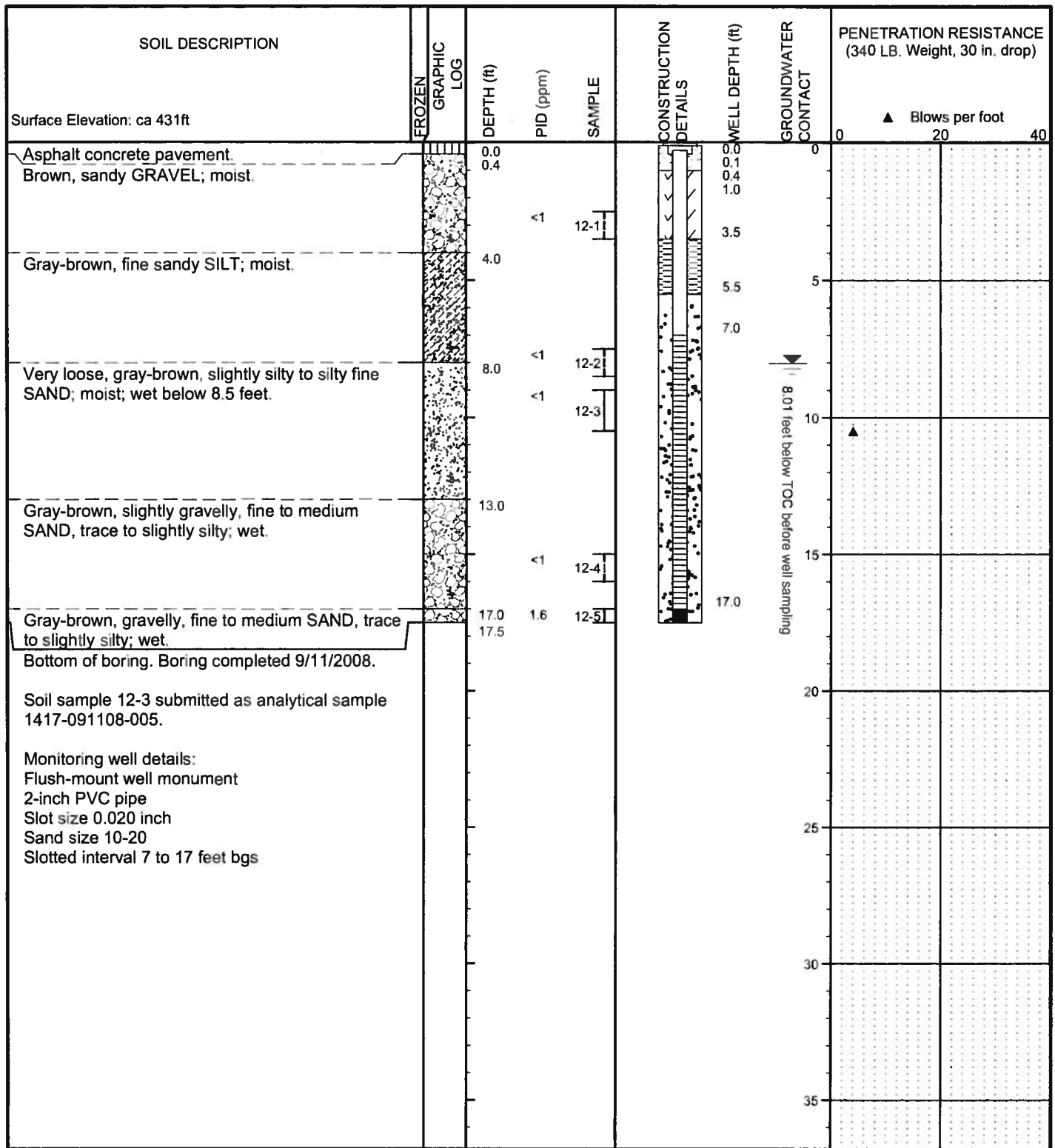
January 2009

31-1-11417-001

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-4

Sheet 1 of 1



Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

**LOG OF MONITORING WELL MW-12**

January 2009

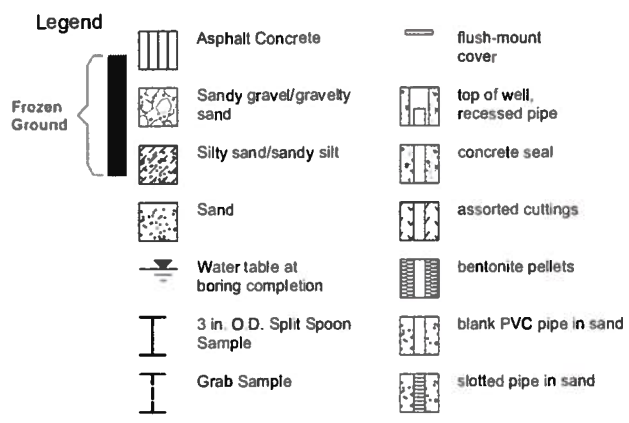
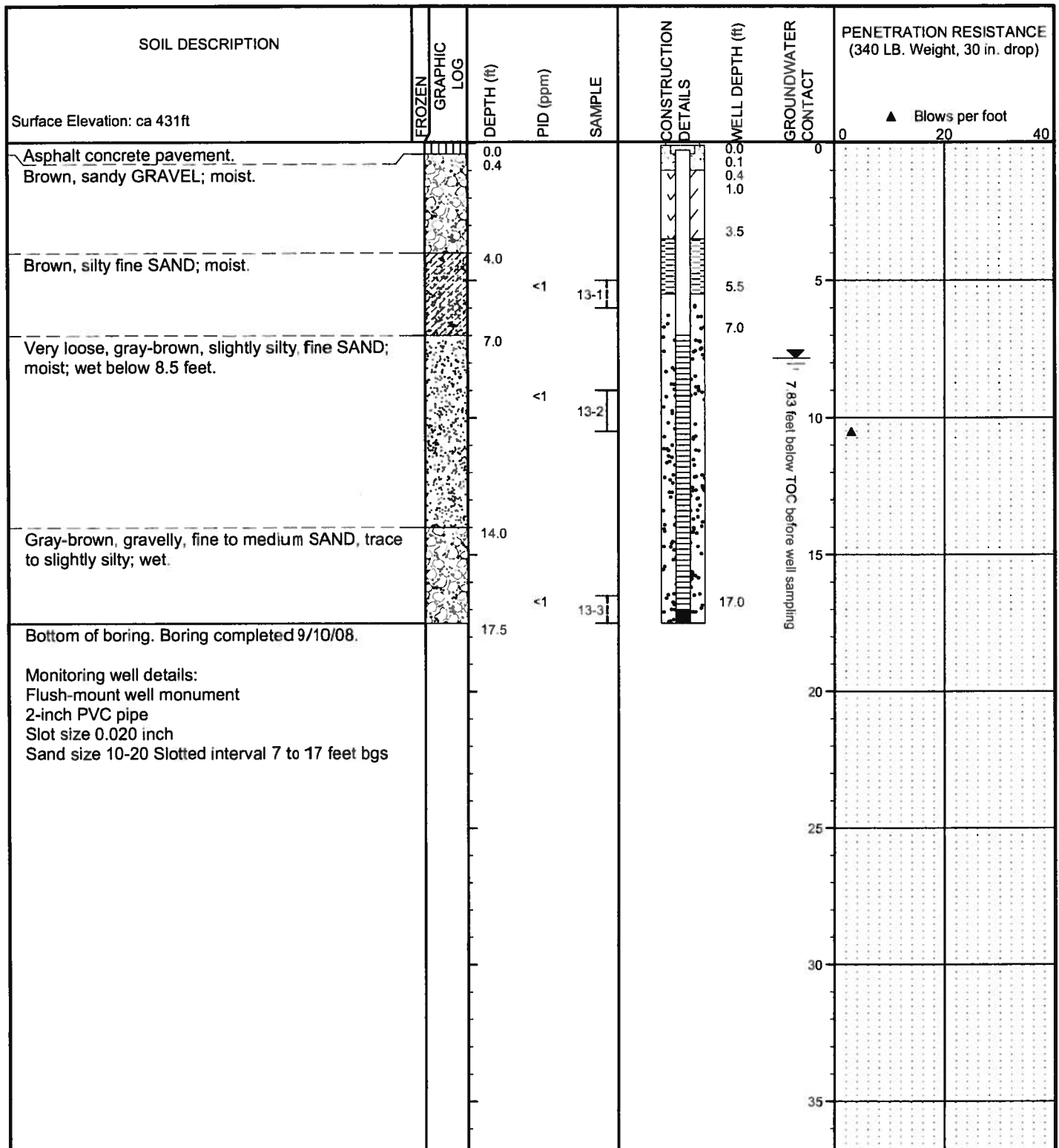
31-1-11417-001

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-5

Sheet 1 of 1





Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

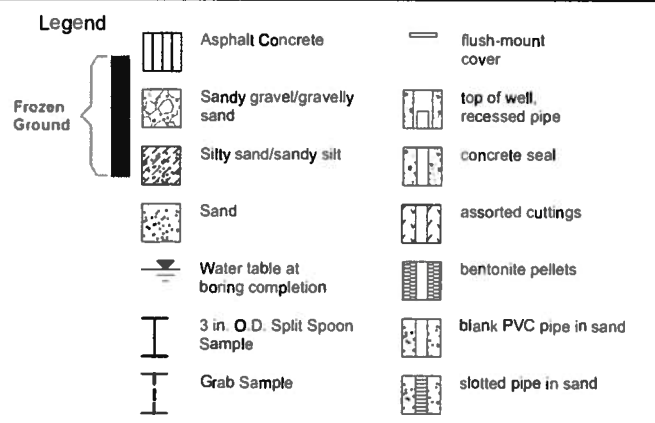
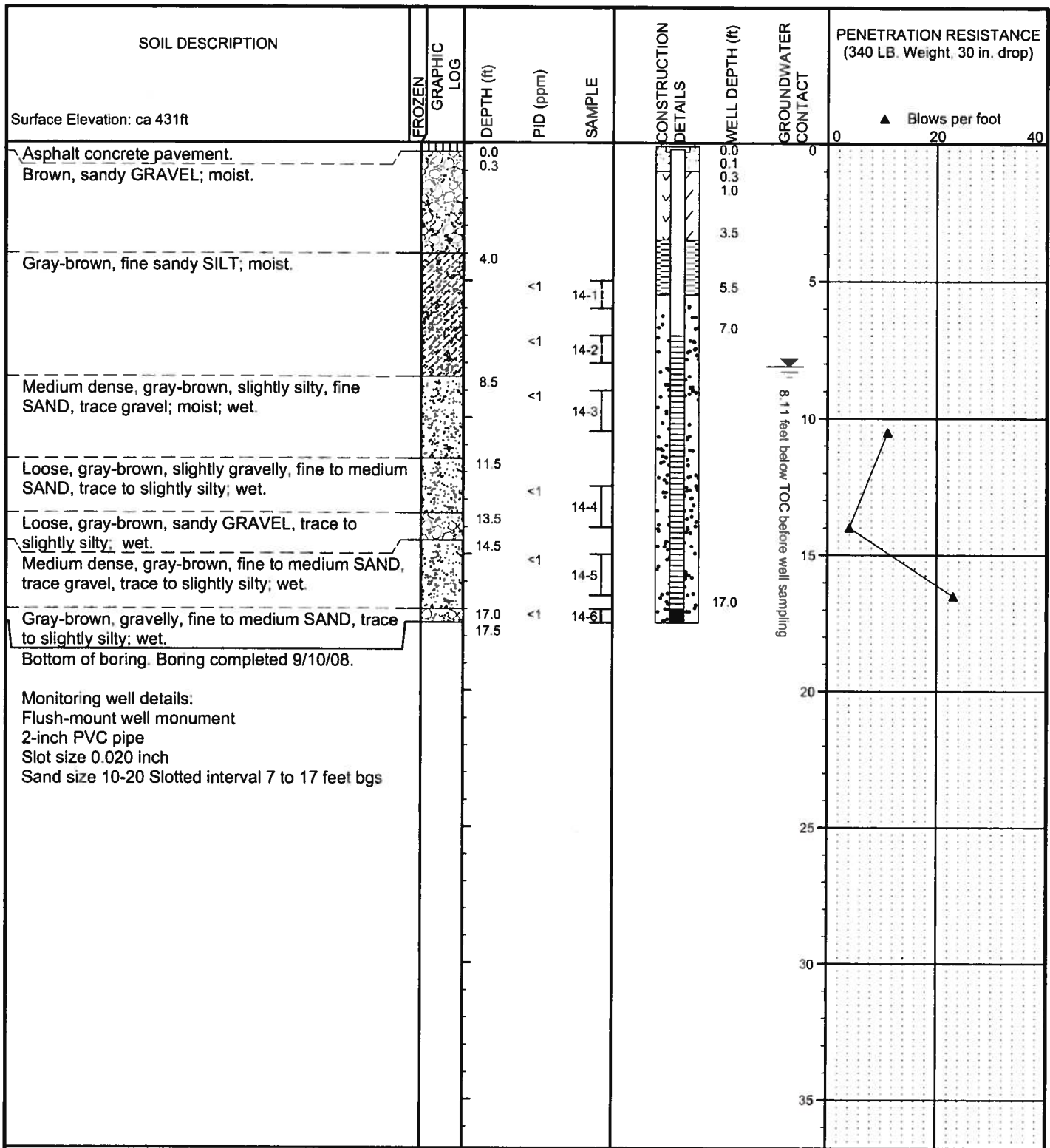
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**LOG OF MONITORING WELL MW-13**

January 2009 31-1-11417-001

**SHANNON & WILSON, INC.**  
GEO-TECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-6  
Sheet 1 of 1



Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

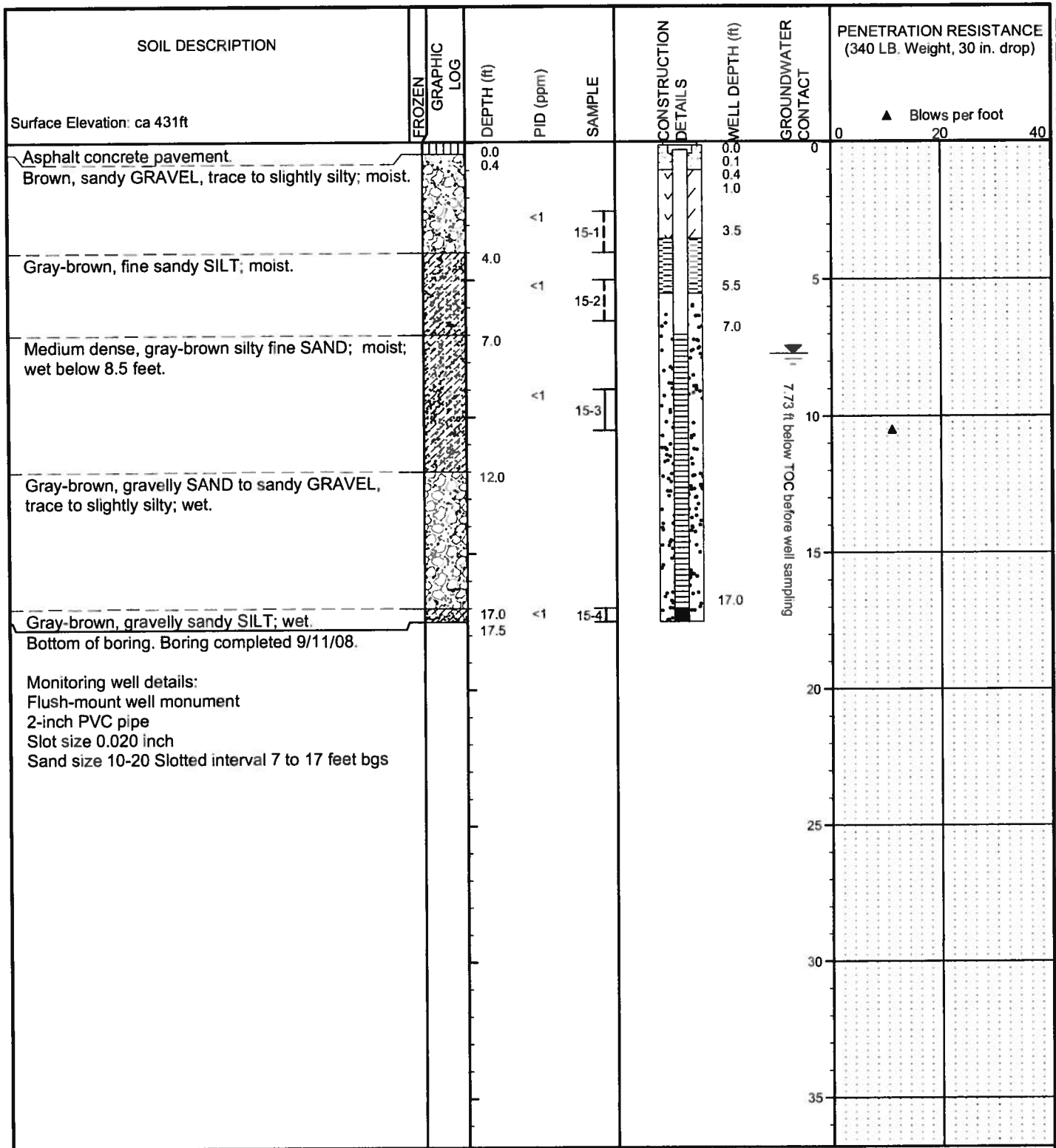
---

**LOG OF MONITORING WELL MW-14**

January 2009 31-1-11417-001

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-7  
Sheet 1 of 1



- Legend**
- Asphalt Concrete
  - Sandy gravel/gravelly sand
  - Silty sand/sandy silt
  - Sand
  - Silt, sand and gravel
  - Water table at boring completion
  - 3 in. O.D. Split Spoon Sample
  - Frozen Ground
  - Grab Sample
  - flush-mount cover
  - top of well, recessed pipe
  - concrete seal
  - assorted cuttings
  - bentonite pellets
  - blank PVC pipe in sand

Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

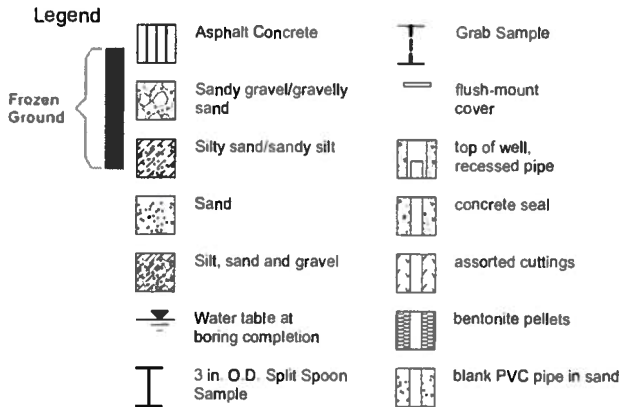
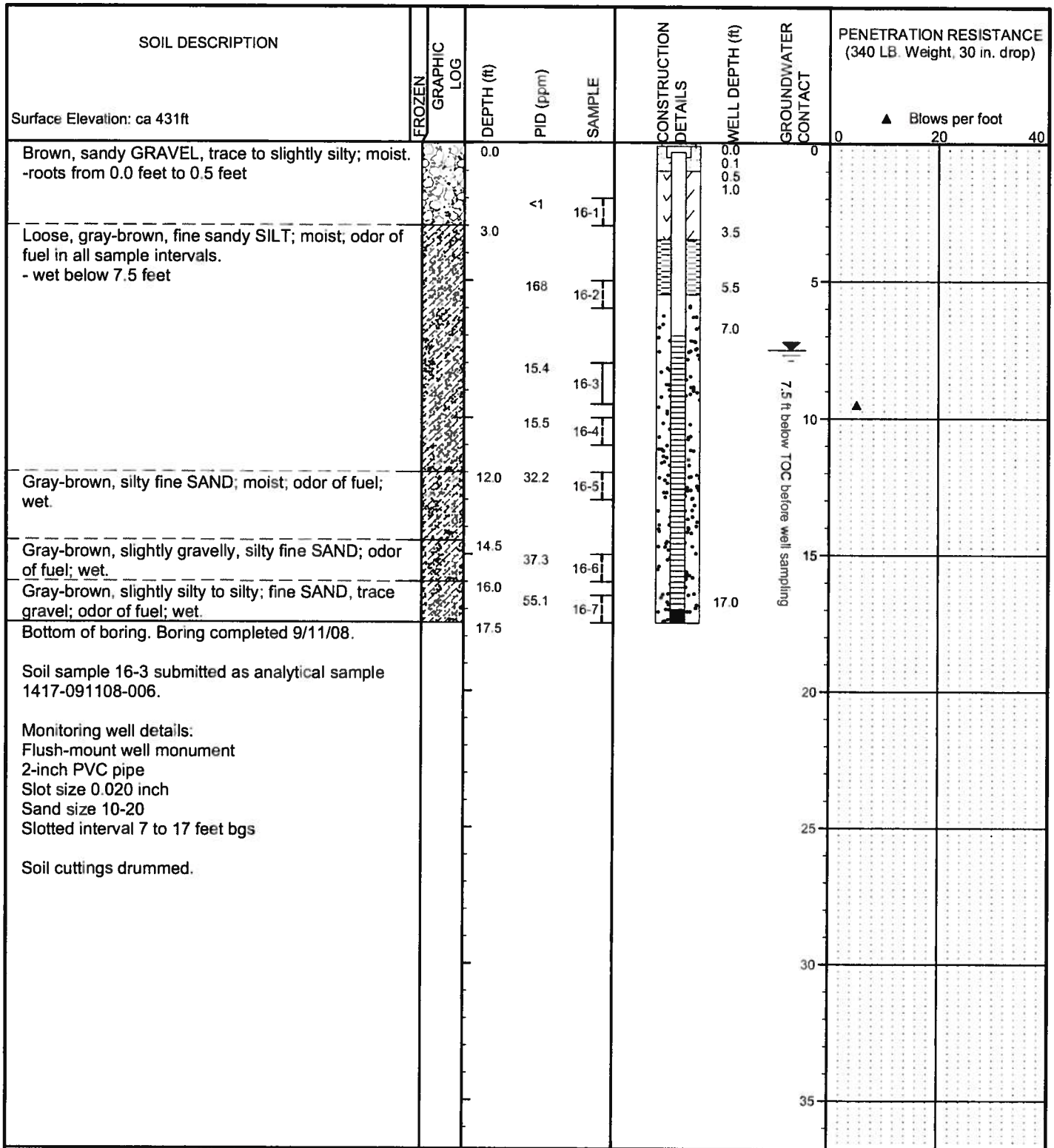
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**LOG OF MONITORING WELL MW-15**

January 2009 31-1-11417-001

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-8  
Sheet 1 of 1



Note: Stratification lines represent approximate boundaries between soil types and transition may be gradual.

**Former Mark Air Warehouse  
5250 Airport Industrial Road  
Fairbanks, Alaska**

**LOG OF MONITORING WELL MW-16**

January 2009

31-1-11417-001

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure A-9

Sheet 1 of 1



**APPENDIX B**

*Stutzmann Engineering Associates FIA Monitor Well Survey*

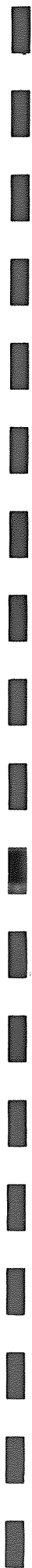
STATION	N LATITUDE	AMI SITE			ELEV.	NORTH	EAST
		W	LONGITUDE	EAST			
NORTH BLDG COR	64 48 50.5555	147 52 50.4677			433.74	3956346.38	1347374.36
EAST BLDG COR	64 48 49.6780	147 52 47.8446			433.74	3956253.89	1347485.22
SOUTH BLDG COR	64 48 48.8851	147 52 49.3203			433.74	3956175.26	1347418.97
MW-1	64 48 48.3058	147 52 54.0325			431.51	3956122.48	1347213.31
MW-2	64 48 48.7828	147 52 49.6048			433.05	3956165.23	1347406.35
MW-3	64 48 50.2829	147 52 54.0182			431.16	3956323.26	1347219.90
WP-3	64 48 51.3556	147 52 51.4530			432.42	3956428.91	1347334.14
MW-4	64 48 51.9857	147 52 49.5012			430.71	3956490.39	1347420.50
MW-5	64 48 50.0810	147 52 45.3155			431.19	3956291.57	1347595.88
MW-6	64 48 50.2883	147 52 47.2806			432.52	3956315.15	1347511.47
MW-7	64 48 49.9012	147 52 47.1468			432.67	3956275.66	1347516.09
MW-8	64 48 51.1870	147 52 53.4654			431.93	3956414.37	1347246.55
MW-9	64 48 52.2074	147 52 54.0101			431.19	3956518.70	1347226.06
MW-10	64 48 50.5072	147 52 52.2220			0.00	3956343.73	1347298.30
MW-11	64 48 52.4122	147 52 54.9398			430.73	3956540.70	1347186.45
MW-12	64 48 51.2769	147 52 55.2500			0.00	3956425.80	1347169.60
MW-13	64 48 50.4508	147 52 55.2484			430.55	3956341.90	1347167.17
MW-14	64 48 49.4686	147 52 54.8598			430.84	3956241.64	1347181.02
MW-15	64 48 47.6210	147 52 55.1774			430.49	3956054.41	1347161.70
MW-16	64 48 46.3980	147 52 57.5824			0.00	3955933.30	1347053.93

Horizontal Datum: NAD 1983, Alaska Zone 3, U.S. Survey Feet Relative horizontal precision: ± 0.1 feet  
 Vertical Datum: NAVD 1988, U.S. Survey Feet Note: elevation of 0.00 indicates obstructed position for levelling  
 Relative local vertical precision: ± 0.01 feet Note: building corner elevations reflect finished floor, not exterior ground

**APPENDIX C**

***SGS Laboratory Results and ADEC Data Review Checklists***







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

Project: 31-1-11417-001 Mark Air  
Client: Shannon & Wilson-Fairbanks  
SGS Work Order: 1084936

Released by:

**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.



Case Narrative

Client SHANFBK Shannon & Wilson-Fairbanks  
Workorder 1084936 31-1-11417-001 Mark Air

Printed Date/Time 9/4/2008 14:15

Sample ID Client Sample ID

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

1084936003 PS MW-3  
AK102 - The pattern is consistent with a highly weathered middle distillate.

1084936006 PS MW-6  
8260B - ICV recovery for dichlorodifluoromethane is biased high. Sample result for dichlorodifluoromethane is estimated in the associated sample.

1084936008 PS MW-8  
AK101 - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
8260B - ICV recovery for dichlorodifluoromethane is biased high. Sample result for dichlorodifluoromethane is estimated in the associated sample.  
AK102 - The pattern is consistent with a weathered gasoline.

1084936010 PS MW-80  
AK101 - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
8260B - ICV recovery for dichlorodifluoromethane is biased high. Sample result for dichlorodifluoromethane is estimated in the associated sample.  
AK102 - The pattern is consistent with a weathered gasoline.

851792 LCSD LCSD for HBN 204931 [VXX/18631  
8260B - LCSD recovery for dichlorodifluoromethane does not meet QC goals (biased low). Results for this analyte may be estimated. This analyte was not detected in the associated samples.  
8260B - LCS/LCSD does not meet laboratory RPD criteria for dichlorodifluoromethane. Results for this analyte are estimated in the associated samples.

200 W. Potter Drive  
Anchorage, AK 99518-1605  
Tel: (907) 562-2343  
Fax: (907) 561-5301  
Web: <http://www.us.sgs.com>

Jon Lindstrom  
Shannon & Wilson-Fairbanks  
2355 Hill Rd  
Fairbanks, AK 99709

---

<b>Work Order:</b>	1084936	
	31-1-11417-001 Mark Air	<b>Released by:</b>
<b>Client:</b>	Shannon & Wilson-Fairbanks	
<b>Report Date:</b>	September 04, 2008	

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Enclosed are the analytical results associated with the above 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), UST-005 (CS) and AK00971 (Micro) for ADEC and 001992 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 9065, 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 other 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.

PQL	Practical Quantitation Limit (reporting 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.
GT	Greater Than
D	The analyte concentration is the result of a dilution.
LT	Less Than
!	Surrogate out of control limits.
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
JL	The analyte was positively identified, but the quantitation is a low estimation.
E	The analyte result is above the calibrated range.
R	Rejected

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.



SGS Ref.# 1084936001  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID MW-1  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Collected Date/Time 08/20/2008 13:16  
Received Date/Time 08/22/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	98.9		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	93		%	SW8021B	A	80-120	08/26/08	08/26/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.400	mg/L	AK102	D		08/27/08	09/03/08	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	96.8		%	AK102	D	50-150	08/27/08	09/03/08	HKG



**SGS Ref.#** 1084936002  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-2  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/20/2008 14:05  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Volatile Fuels Department**

Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	99.5		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	90.8		%	SW8021B	A	80-120	08/26/08	08/26/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		08/27/08	09/03/08	HKG
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**Surrogates**

5a Androstane <surr>	110		%	AK102	D	50-150	08/27/08	09/03/08	HKG
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SGS Ref.# 1084936003  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID MW-3  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Collected Date/Time 08/20/2008 15:26  
Received Date/Time 08/22/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a highly weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	104		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	92.4		%	SW8021B	A	80-120	08/26/08	08/26/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	0.712	0.400	mg/L	AK102	D		08/27/08	09/03/08	HKG
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**Surrogates**

5a Androstane <surr>	101		%	AK102	D	50-150	08/27/08	09/03/08	HKG
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SGS Ref.# 1084936004  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID MW-4  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Collected Date/Time 08/20/2008 16:14  
Received Date/Time 08/22/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Volatile Fuels Department**

Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	0.543	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	8.58	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	27.1	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	124		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	91.6		%	SW8021B	A	80-120	08/26/08	08/26/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		08/27/08	09/03/08	HKG
-----------------------	----	-------	------	-------	---	--	----------	----------	-----

**Surrogates**

5a Androstane <surr>	98.4		%	AK102	D	50-150	08/27/08	09/03/08	HKG
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**SGS Ref.#** 1084936005  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-5  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/20/2008 17:00  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	104		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	91		%	SW8021B	A	80-120	08/26/08	08/26/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		08/27/08	09/03/08	HKG
-----------------------	----	-------	------	-------	---	--	----------	----------	-----

**Surrogates**

5a Androstane <surr>	103		%	AK102	D	50-150	08/27/08	09/03/08	HKG
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**SGS Ref.#** 1084936006  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-6  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 10:54  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

**Sample Remarks:**

8260B - ICV recovery for dichlorodifluoromethane is biased high. Sample result for dichlorodifluoromethane is estimated in the associated sample.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	104		%	AK101	A	50-150	08/26/08	08/26/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.400	mg/L	AK102	G		08/27/08	09/03/08	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	98.2		%	AK102	G	50-150	08/27/08	09/03/08	HKG
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	ND	0.400	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Toluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Ethylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
n-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon disulfide	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3,5-Trimethylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Isopropyltoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936006  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-6  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 10:54  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
n-Propylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Styrene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromomethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Tetrachloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromochloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloroform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromomethane	ND	3.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromochloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Vinyl chloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dichlorodifluoromethane	1.87	1.00	ug/L	SW8260B	F		08/26/08	08/26/08	KPW
Chloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
sec-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromodichloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methylene chloride	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
P & M -Xylene	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936006  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-6  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 10:54  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Naphthalene	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
o-Xylene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromoform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Xylenes (total)	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,4-Trimethylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Isopropylbenzene (Cumene)	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Hexanone	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	103		%	SW8260B	D	73-120	08/25/08	08/26/08	JDB
Toluene-d8 <surr>	99.5		%	SW8260B	D	80-120	08/25/08	08/26/08	JDB
4-Bromofluorobenzene <surr>	106		%	SW8260B	D	76-120	08/25/08	08/26/08	JDB



SGS Ref.# 1084936007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID MW-7  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Collected Date/Time 08/21/2008 11:40  
Received Date/Time 08/22/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	104		%	AK101	A	50-150	08/26/08	08/26/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.400	mg/L	AK102	G		08/27/08	09/03/08	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	104		%	AK102	G	50-150	08/27/08	09/03/08	HKG
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	ND	0.400	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Toluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Ethylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
n-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon disulfide	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3,5-Trimethylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Isopropyltoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936007  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-7  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 11:40  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
n-Propylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Styrene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromomethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Tetrachloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromochloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloroform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromomethane	ND	3.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromochloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Vinyl chloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dichlorodifluoromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
sec-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromodichloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methylene chloride	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichlorofluoromethane	13.8	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
P & M -Xylene	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936007  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-7  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 11:40  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Naphthalene	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
o-Xylene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromoform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Xylenes (total)	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,4-Trimethylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Isopropylbenzene (Cumene)	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Hexanone	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	100		%	SW8260B	D	73-120	08/25/08	08/26/08	JDB
Toluene-d8 <surr>	99.9		%	SW8260B	D	80-120	08/25/08	08/26/08	JDB
4-Bromofluorobenzene <surr>	106		%	SW8260B	D	76-120	08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936008  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-8  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:14  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

**Sample Remarks:**

AK101 - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
 8260B - ICV recovery for dichlorodifluoromethane is biased high. Sample result for dichlorodifluoromethane is estimated in the associated sample.  
 AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	2.33	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
<b>Surrogates</b>									
4-Bromofluorobenzene <surr>	182	!	%	AK101	A	50-150	08/26/08	08/26/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	0.950	0.400	mg/L	AK102	G		08/27/08	09/03/08	HKG
<b>Surrogates</b>									
5a Androstane <surr>	101		%	AK102	G	50-150	08/27/08	09/03/08	HKG
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	584	8.00	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
Toluene	6.37	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Ethylbenzene	108	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
n-Butylbenzene	2.06	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon disulfide	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloroethane	4.92	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3,5-Trimethylbenzene	15.9	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB





SGS Ref.# 1084936008  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID MW-8  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Collected Date/Time 08/21/2008 13:14  
Received Date/Time 08/22/2008 9:40  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
4-Isopropyltoluene	3.41	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
n-Propylbenzene	21.3	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Styrene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromomethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Tetrachloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromochloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloroform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromomethane	ND	3.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromochloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Vinyl chloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dichlorodifluoromethane	2.07	1.00	ug/L	SW8260B	F		08/26/08	08/26/08	KPW
Chloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
sec-Butylbenzene	1.65	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromodichloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methylene chloride	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936008  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-8  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:14  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
P & M -Xylene	188	40.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
Naphthalene	29.9	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
o-Xylene	41.8	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
o-Xylene	47.8	1.00	ug/L	SW8260B	F		08/26/08	08/26/08	KPW
Bromoform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Xylenes (total)	230	40.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
1,2,4-Trimethylbenzene	75.4	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Isopropylbenzene (Cumene)	15.3	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Hexanone	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	99.2		%	SW8260B	D	73-120	08/25/08	08/26/08	JDB
Toluene-d8 <surr>	99.7		%	SW8260B	D	80-120	08/25/08	08/26/08	JDB
4-Bromofluorobenzene <surr>	98.6		%	SW8260B	D	76-120	08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936009  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-9  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:52  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	0.620	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	109		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	92.1		%	SW8021B	A	80-120	08/26/08	08/26/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		08/27/08	09/03/08	HKG
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**Surrogates**

5a Androstane <surr>	95.9		%	AK102	D	50-150	08/27/08	09/03/08	HKG
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**SGS Ref.#** 1084936010  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-80  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:20  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

**Sample Remarks:**

AK101 - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
 8260B - ICV recovery for dichlorodifluoromethane is biased high. Sample result for dichlorodifluoromethane is estimated in the associated sample.  
 AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	2.29	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	180	!	%	AK101	A	50-150	08/26/08	08/26/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	1.11	0.400	mg/L	AK102	G		08/27/08	09/03/08	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	97.2		%	AK102	G	50-150	08/27/08	09/03/08	HKG
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	633	8.00	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
Toluene	7.12	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Ethylbenzene	121	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
n-Butylbenzene	2.59	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon disulfide	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloroethane	5.12	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3,5-Trimethylbenzene	17.7	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chlorobenzene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936010  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-80  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:20  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
4-Isopropyltoluene	3.64	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
n-Propylbenzene	22.8	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Styrene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromomethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Tetrachloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dibromochloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloroform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Chloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromomethane	ND	3.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromochloromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Vinyl chloride	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Dichlorodifluoromethane	ND	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
Dichlorodifluoromethane	2.24	1.00	ug/L	SW8260B	F		08/26/08	08/26/08	KPW
Chloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
sec-Butylbenzene	1.81	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Bromodichloromethane	ND	0.500	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936010  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-80  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:20  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Methylene chloride	ND	5.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
P & M -Xylene	209	40.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
Naphthalene	33.9	2.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
o-Xylene	48.6	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
o-Xylene	63.1	1.00	ug/L	SW8260B	F		08/26/08	08/26/08	KPW
Bromoform	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Xylenes (total)	258	40.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
1,2,4-Trimethylbenzene	80.8	20.0	ug/L	SW8260B	E		08/26/08	08/26/08	KPW
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Trichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
Isopropylbenzene (Cumene)	16.3	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
2-Hexanone	ND	10.0	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	D		08/25/08	08/26/08	JDB
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	101		%	SW8260B	D	73-120	08/25/08	08/26/08	JDB
Toluene-d8 <surr>	100		%	SW8260B	D	80-120	08/25/08	08/26/08	JDB
4-Bromofluorobenzene <surr>	99.1		%	SW8260B	D	76-120	08/25/08	08/26/08	JDB



**SGS Ref.#** 1084936010  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** MW-80  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/21/2008 13:20  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede



SGS Ref.# 1084936011  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID TB  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Collected Date/Time 08/20/2008 13:16  
Received Date/Time 08/22/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Fuels Department</b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		08/26/08	08/26/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		08/26/08	08/26/08	HM
<b>Surrogates</b>									
4-Bromofluorobenzene <surr>	104		%	AK101	A	50-150	08/26/08	08/26/08	HM
1,4-Difluorobenzene <surr>	90.4		%	SW8021B	A	80-120	08/26/08	08/26/08	HM

**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	ND	0.400	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Toluene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Ethylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
n-Butylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Carbon disulfide	ND	2.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2-Dichloroethane	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,3,5-Trimethylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Chlorobenzene	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
4-Isopropyltoluene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
n-Propylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB





**SGS Ref.#** 1084936011  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** TB  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/20/2008 13:16  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Styrene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Dibromomethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Tetrachloroethene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Dibromochloromethane	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Chloroform	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Bromobenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Chloromethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Bromomethane	ND	3.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Bromochloromethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Vinyl chloride	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Dichlorodifluoromethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Chloroethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
sec-Butylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Bromodichloromethane	ND	0.500	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Methylene chloride	ND	5.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
P & M -Xylene	ND	2.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Naphthalene	ND	2.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB



**SGS Ref.#** 1084936011  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** TB  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Collected Date/Time** 08/20/2008 13:16  
**Received Date/Time** 08/22/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
o-Xylene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Bromoform	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Xylenes (total)	ND	2.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2,4-Trimethylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Trichloroethene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
Isopropylbenzene (Cumene)	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
2-Hexanone	ND	10.0	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	B		08/25/08	08/25/08	JDB
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	103		%	SW8260B	B	73-120	08/25/08	08/25/08	JDB
Toluene-d8 <surr>	99.3		%	SW8260B	B	80-120	08/25/08	08/25/08	JDB
4-Bromofluorobenzene <surr>	109		%	SW8260B	B	76-120	08/25/08	08/25/08	JDB



SGS Ref.# 851790 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Prep Batch VXX18631  
Method SW5030B  
Date 08/25/2008

QC results affect the following production samples:

1084936006, 1084936007, 1084936008, 1084936010, 1084936011

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>					
Benzene	ND	0.400	0.120	ug/L	08/25/08
Toluene	ND	1.00	0.310	ug/L	08/25/08
Ethylbenzene	ND	1.00	0.310	ug/L	08/25/08
n-Butylbenzene	ND	1.00	0.310	ug/L	08/25/08
Carbon disulfide	ND	2.00	0.620	ug/L	08/25/08
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	08/25/08
1,2-Dichloroethane	ND	0.500	0.150	ug/L	08/25/08
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	08/25/08
4-Chlorotoluene	ND	1.00	0.310	ug/L	08/25/08
Chlorobenzene	ND	0.500	0.150	ug/L	08/25/08
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	08/25/08
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	08/25/08
4-Isopropyltoluene	ND	1.00	0.310	ug/L	08/25/08
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	08/25/08
n-Propylbenzene	ND	1.00	0.310	ug/L	08/25/08
Styrene	ND	1.00	0.310	ug/L	08/25/08
Dibromomethane	ND	1.00	0.310	ug/L	08/25/08
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	08/25/08
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	08/25/08
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	08/25/08
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	08/25/08
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	08/25/08
Tetrachloroethene	ND	1.00	0.310	ug/L	08/25/08
Dibromochloromethane	ND	0.500	0.150	ug/L	08/25/08
1,3-Dichloropropane	ND	0.400	0.120	ug/L	08/25/08
1,2-Dibromoethane	ND	1.00	0.310	ug/L	08/25/08
Carbon tetrachloride	ND	1.00	0.310	ug/L	08/25/08
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	08/25/08
Chloroform	ND	1.00	0.300	ug/L	08/25/08
Bromobenzene	ND	1.00	0.310	ug/L	08/25/08
Chloromethane	ND	1.00	0.310	ug/L	08/25/08
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	08/25/08
Bromomethane	ND	3.00	0.940	ug/L	08/25/08
Bromochloromethane	ND	1.00	0.310	ug/L	08/25/08
Vinyl chloride	ND	1.00	0.310	ug/L	08/25/08
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	08/25/08



SGS Ref.# 851790 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Prep Batch VXX18631  
Method SW5030B  
Date 08/25/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Chloroethane	ND	1.00	0.310	ug/L	08/25/08
sec-Butylbenzene	ND	1.00	0.310	ug/L	08/25/08
Bromodichloromethane	ND	0.500	0.150	ug/L	08/25/08
1,1-Dichloroethene	ND	1.00	0.310	ug/L	08/25/08
2-Butanone (MEK)	ND	10.0	3.10	ug/L	08/25/08
Methylene chloride	ND	5.00	1.00	ug/L	08/25/08
Trichlorofluoromethane	ND	1.00	0.310	ug/L	08/25/08
P & M -Xylene	ND	2.00	0.620	ug/L	08/25/08
Naphthalene	ND	2.00	0.620	ug/L	08/25/08
o-Xylene	ND	1.00	0.310	ug/L	08/25/08
Bromoform	ND	1.00	0.310	ug/L	08/25/08
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	08/25/08
tert-Butylbenzene	ND	1.00	0.310	ug/L	08/25/08
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	08/25/08
1,1-Dichloroethane	ND	1.00	0.310	ug/L	08/25/08
2-Chlorotoluene	ND	1.00	0.310	ug/L	08/25/08
Trichloroethene	ND	1.00	0.310	ug/L	08/25/08
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	08/25/08
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	08/25/08
2,2-Dichloropropane	ND	1.00	0.310	ug/L	08/25/08
Hexachlorobutadiene	ND	1.00	0.310	ug/L	08/25/08
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	08/25/08
2-Hexanone	ND	10.0	3.10	ug/L	08/25/08
1,2-Dichloropropane	ND	1.00	0.310	ug/L	08/25/08
1,1-Dichloropropene	ND	1.00	0.310	ug/L	08/25/08
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	08/25/08
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	08/25/08
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	08/25/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	101	73-120		%	08/25/08
Toluene-d8 <surr>	101	80-120		%	08/25/08
4-Bromofluorobenzene <surr>	105	76-120		%	08/25/08

Batch VMS10055  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



**SGS Ref.#** 851897 Method Blank  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Prep Batch** VXX18633  
**Method** SW5030B  
**Date** 08/26/2008

QC results affect the following production samples:

1084936001, 1084936002, 1084936003, 1084936004, 1084936005, 1084936006, 1084936007, 1084936008, 1084936009, 1084936010, 1084936011

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Fuels Department</u></b>					
Gasoline Range Organics	ND	0.100	0.0100	mg/L	08/26/08
Benzene	ND	0.000500	0.000150	mg/L	08/26/08
Toluene	ND	0.00200	0.000620	mg/L	08/26/08
Ethylbenzene	ND	0.00200	0.000620	mg/L	08/26/08
o-Xylene	ND	0.00200	0.000620	mg/L	08/26/08
P & M -Xylene	ND	0.00200	0.000620	mg/L	08/26/08
<b>Surrogates</b>					
4-Bromofluorobenzene <surr>	104	50-150		%	08/26/08
1,4-Difluorobenzene <surr>	91.6	80-120		%	08/26/08
<b>Batch</b>	VFC9133				
<b>Method</b>	AK101				
<b>Instrument</b>	HP 5890 Series II PID+FID VCA				
Benzene	ND	0.500	0.150	ug/L	08/26/08
Toluene	ND	2.00	0.620	ug/L	08/26/08
Ethylbenzene	ND	2.00	0.620	ug/L	08/26/08
o-Xylene	ND	2.00	0.620	ug/L	08/26/08
P & M -Xylene	ND	2.00	0.620	ug/L	08/26/08
<b>Surrogates</b>					
1,4-Difluorobenzene <surr>	91.6	80-120		%	08/26/08
<b>Batch</b>	VFC9133				
<b>Method</b>	SW8021B				
<b>Instrument</b>	HP 5890 Series II PID+FID VCA				



SGS Ref.# 851949 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Prep Batch VXX18637  
Method SW5030B  
Date 08/26/2008

QC results affect the following production samples:

1084936006, 1084936008, 1084936010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	ND	0.400	0.120	ug/L	08/26/08
Ethylbenzene	ND	1.00	0.310	ug/L	08/26/08
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	08/26/08
P & M -Xylene	ND	2.00	0.620	ug/L	08/26/08
o-Xylene	ND	1.00	0.310	ug/L	08/26/08
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	08/26/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	101	73-120		%	08/26/08
Toluene-d8 <surr>	101	80-120		%	08/26/08
4-Bromofluorobenzene <surr>	104	76-120		%	08/26/08

Batch VMS10057  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 852165 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Prep Batch XXX19931  
Method SW3520C  
Date 08/27/2008

QC results affect the following production samples:

1084936001, 1084936002, 1084936003, 1084936004, 1084936005, 1084936006, 1084936007, 1084936008, 1084936009, 1084936010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics	0.163 J	0.400	0.0800	mg/L	09/03/08
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**Surrogates**

5a Androstane <surr>	99.6	60-120		%	09/03/08
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Batch XFC8158

Method AK102

Instrument HP 5890 Series II FID SV D R



**SGS Ref.#** 851791 Lab Control Sample  
 851792 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Prep Batch** VXX18631  
**Method** SW5030B  
**Date** 08/25/2008

QC results affect the following production samples:

1084936006, 1084936007, 1084936008, 1084936010, 1084936011

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
Benzene	LCS	28.6	95	( 80-120 )		30 ug/L	08/25/2008
	LCSD	28.2	94		1 (< 20)	30 ug/L	08/25/2008
Toluene	LCS	30.9	103	( 77-120 )		30 ug/L	08/25/2008
	LCSD	30.3	101		2 (< 20)	30 ug/L	08/25/2008
Ethylbenzene	LCS	31.2	104	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.1	104		0 (< 20)	30 ug/L	08/25/2008
n-Butylbenzene	LCS	28.6	96	( 80-124 )		30 ug/L	08/25/2008
	LCSD	30.2	101		5 (< 20)	30 ug/L	08/25/2008
Carbon disulfide	LCS	43.3	96	( 72-123 )		45 ug/L	08/25/2008
	LCSD	42.0	93		3 (< 20)	45 ug/L	08/25/2008
1,4-Dichlorobenzene	LCS	30.0	100	( 80-120 )		30 ug/L	08/25/2008
	LCSD	30.3	101		1 (< 20)	30 ug/L	08/25/2008
1,2-Dichloroethane	LCS	31.0	103	( 80-129 )		30 ug/L	08/25/2008
	LCSD	30.8	103		1 (< 20)	30 ug/L	08/25/2008
1,3,5-Trimethylbenzene	LCS	30.8	103	( 80-128 )		30 ug/L	08/25/2008
	LCSD	30.5	102		1 (< 20)	30 ug/L	08/25/2008
4-Chlorotoluene	LCS	30.0	100	( 79-128 )		30 ug/L	08/25/2008
	LCSD	29.8	99		1 (< 20)	30 ug/L	08/25/2008
Chlorobenzene	LCS	31.0	103	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.0	103		0 (< 20)	30 ug/L	08/25/2008
4-Methyl-2-pentanone (MIBK)	LCS	92.1	102	( 69-134 )		90 ug/L	08/25/2008
	LCSD	92.6	103		1 (< 20)	90 ug/L	08/25/2008
cis-1,2-Dichloroethene	LCS	30.9	103	( 80-125 )		30 ug/L	08/25/2008
	LCSD	30.8	103		0 (< 20)	30 ug/L	08/25/2008
4-Isopropyltoluene	LCS	30.1	100	( 80-125 )		30 ug/L	08/25/2008
	LCSD	30.7	102		2 (< 20)	30 ug/L	08/25/2008





SGS Ref.# 851791 Lab Control Sample  
 851792 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18631  
 Method SW5030B  
 Date 08/25/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
cis-1,3-Dichloropropene	LCS	30.7	102	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.0	103		1 (< 20)	30 ug/L	08/25/2008
n-Propylbenzene	LCS	30.9	103	( 80-129 )		30 ug/L	08/25/2008
	LCSD	30.6	102		1 (< 20)	30 ug/L	08/25/2008
Styrene	LCS	31.7	106	( 80-120 )		30 ug/L	08/25/2008
	LCSD	32.0	107		1 (< 20)	30 ug/L	08/25/2008
Dibromomethane	LCS	32.1	107	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.6	105		1 (< 20)	30 ug/L	08/25/2008
trans-1,3-Dichloropropene	LCS	30.0	100	( 80-124 )		30 ug/L	08/25/2008
	LCSD	31.6	105		5 (< 20)	30 ug/L	08/25/2008
1,2,4-Trichlorobenzene	LCS	29.9	100	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.5	105		5 (< 20)	30 ug/L	08/25/2008
1,1,2,2-Tetrachloroethane	LCS	29.7	99	( 76-123 )		30 ug/L	08/25/2008
	LCSD	29.9	100		0 (< 20)	30 ug/L	08/25/2008
1,2-Dibromo-3-chloropropane	LCS	30.7	102	( 73-130 )		30 ug/L	08/25/2008
	LCSD	32.1	107		5 (< 20)	30 ug/L	08/25/2008
Methyl-t-butyl ether	LCS	44.8	100	( 80-120 )		45 ug/L	08/25/2008
	LCSD	45.3	101		1 (< 20)	45 ug/L	08/25/2008
Tetrachloroethene	LCS	30.7	102	( 79-122 )		30 ug/L	08/25/2008
	LCSD	30.5	102		1 (< 20)	30 ug/L	08/25/2008
Dibromochloromethane	LCS	29.5	98	( 80-120 )		30 ug/L	08/25/2008
	LCSD	30.6	102		4 (< 20)	30 ug/L	08/25/2008
1,3-Dichloropropane	LCS	31.0	103	( 80-121 )		30 ug/L	08/25/2008
	LCSD	31.4	105		1 (< 20)	30 ug/L	08/25/2008
1,2-Dibromoethane	LCS	31.8	106	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.4	105		1 (< 20)	30 ug/L	08/25/2008
Carbon tetrachloride	LCS	29.4	98	( 80-126 )		30 ug/L	08/25/2008
	LCSD	30.4	101		3 (< 20)	30 ug/L	08/25/2008



SGS Ref.# 851791 Lab Control Sample  
 851792 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18631  
 Method SW5030B  
 Date 08/25/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
1,1,1,2-Tetrachloroethane	LCS	30.2	101	( 80-120 )		30 ug/L	08/25/2008
	LCSD	30.3	101		0	(< 20)	30 ug/L 08/25/2008
Chloroform	LCS	30.1	100	( 80-124 )		30 ug/L	08/25/2008
	LCSD	29.7	99		1	(< 20)	30 ug/L 08/25/2008
Bromobenzene	LCS	29.5	98	( 80-120 )		30 ug/L	08/25/2008
	LCSD	29.3	98		0	(< 20)	30 ug/L 08/25/2008
Chloromethane	LCS	26.8	89	( 67-125 )		30 ug/L	08/25/2008
	LCSD	24.9	83		8	(< 20)	30 ug/L 08/25/2008
1,2,3-Trichloropropane	LCS	29.9	100	( 80-120 )		30 ug/L	08/25/2008
	LCSD	29.2	98		2	(< 20)	30 ug/L 08/25/2008
Bromomethane	LCS	30.3	101	( 30-140 )		30 ug/L	08/25/2008
	LCSD	30.6	102		1	(< 20)	30 ug/L 08/25/2008
Bromochloromethane	LCS	30.1	100	( 77-129 )		30 ug/L	08/25/2008
	LCSD	30.5	102		1	(< 20)	30 ug/L 08/25/2008
Vinyl chloride	LCS	29.0	97	( 72-145 )		30 ug/L	08/25/2008
	LCSD	25.4	85		14	(< 20)	30 ug/L 08/25/2008
Dichlorodifluoromethane	LCS	24.3	81	( 62-153 )		30 ug/L	08/25/2008
	LCSD	18.2	61 *		29 *	(< 20)	30 ug/L 08/25/2008
Chloroethane	LCS	30.2	101	( 67-133 )		30 ug/L	08/25/2008
	LCSD	26.3	88		14	(< 20)	30 ug/L 08/25/2008
sec-Butylbenzene	LCS	29.9	100	( 80-120 )		30 ug/L	08/25/2008
	LCSD	30.5	102		2	(< 20)	30 ug/L 08/25/2008
Bromodichloromethane	LCS	32.4	108	( 80-120 )		30 ug/L	08/25/2008
	LCSD	32.9	110		2	(< 20)	30 ug/L 08/25/2008
1,1-Dichloroethene	LCS	31.0	103	( 76-130 )		30 ug/L	08/25/2008
	LCSD	30.5	102		2	(< 20)	30 ug/L 08/25/2008
2-Butanone (MEK)	LCS	94.0	104	( 66-136 )		90 ug/L	08/25/2008



SGS Ref.# 851791 Lab Control Sample  
 851792 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18631  
 Method SW5030B  
 Date 08/25/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
	LCS	96.1	107	2	(< 20)	90 ug/L	08/25/2008
Methylene chloride	LCS	30.5	102	( 63-131 )		30 ug/L	08/25/2008
	LCS	29.6	99	3	(< 20)	30 ug/L	08/25/2008
Trichlorofluoromethane	LCS	31.0	103	( 68-145 )		30 ug/L	08/25/2008
	LCS	28.1	94	10	(< 20)	30 ug/L	08/25/2008
P & M -Xylene	LCS	63.2	105	( 80-120 )		60 ug/L	08/25/2008
	LCS	63.1	105	0	(< 20)	60 ug/L	08/25/2008
Naphthalene	LCS	30.7	102	( 75-120 )		30 ug/L	08/25/2008
	LCS	33.2	111	8	(< 20)	30 ug/L	08/25/2008
o-Xylene	LCS	31.5	105	( 80-120 )		30 ug/L	08/25/2008
	LCS	31.2	104	1	(< 20)	30 ug/L	08/25/2008
Bromoform	LCS	29.1	97	( 80-120 )		30 ug/L	08/25/2008
	LCS	30.3	101	4	(< 20)	30 ug/L	08/25/2008
1,2,4-Trimethylbenzene	LCS	30.5	102	( 80-125 )		30 ug/L	08/25/2008
	LCS	31.0	103	1	(< 20)	30 ug/L	08/25/2008
tert-Butylbenzene	LCS	29.4	98	( 80-122 )		30 ug/L	08/25/2008
	LCS	30.0	100	2	(< 20)	30 ug/L	08/25/2008
1,1,1-Trichloroethane	LCS	31.8	106	( 80-122 )		30 ug/L	08/25/2008
	LCS	31.8	106	0	(< 20)	30 ug/L	08/25/2008
1,1-Dichloroethane	LCS	30.6	102	( 80-120 )		30 ug/L	08/25/2008
	LCS	29.8	99	3	(< 20)	30 ug/L	08/25/2008
2-Chlorotoluene	LCS	26.6	89	( 80-125 )		30 ug/L	08/25/2008
	LCS	26.5	88	0	(< 20)	30 ug/L	08/25/2008
Trichloroethene	LCS	31.3	104	( 80-125 )		30 ug/L	08/25/2008
	LCS	30.8	103	2	(< 20)	30 ug/L	08/25/2008
trans-1,2-Dichloroethene	LCS	32.1	107	( 79-132 )		30 ug/L	08/25/2008
	LCS	31.1	104	3	(< 20)	30 ug/L	08/25/2008



SGS Ref.# 851791 Lab Control Sample  
 851792 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18631  
 Method SW5030B  
 Date 08/25/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
1,2-Dichlorobenzene	LCS	30.8	103	( 80-120 )		30 ug/L	08/25/2008
	LCSD	31.2	104		1	(< 20)	30 ug/L 08/25/2008
2,2-Dichloropropane	LCS	29.2	97	( 80-132 )		30 ug/L	08/25/2008
	LCSD	29.4	98		1	(< 20)	30 ug/L 08/25/2008
Hexachlorobutadiene	LCS	29.9	100	( 77-125 )		30 ug/L	08/25/2008
	LCSD	30.9	103		3	(< 20)	30 ug/L 08/25/2008
Isopropylbenzene (Cumene)	LCS	32.1	107	( 80-121 )		30 ug/L	08/25/2008
	LCSD	32.0	107		0	(< 20)	30 ug/L 08/25/2008
2-Hexanone	LCS	92.9	103	( 68-130 )		90 ug/L	08/25/2008
	LCSD	94.1	105		1	(< 20)	90 ug/L 08/25/2008
1,2-Dichloropropane	LCS	31.6	105	( 80-121 )		30 ug/L	08/25/2008
	LCSD	31.4	105		1	(< 20)	30 ug/L 08/25/2008
1,1-Dichloropropene	LCS	30.5	102	( 80-122 )		30 ug/L	08/25/2008
	LCSD	30.5	102		0	(< 20)	30 ug/L 08/25/2008
1,1,2-Trichloroethane	LCS	31.4	105	( 77-120 )		30 ug/L	08/25/2008
	LCSD	31.4	105		0	(< 20)	30 ug/L 08/25/2008
1,3-Dichlorobenzene	LCS	30.1	100	( 80-120 )		30 ug/L	08/25/2008
	LCSD	30.2	101		1	(< 20)	30 ug/L 08/25/2008
1,2,3-Trichlorobenzene	LCS	30.8	103	( 77-120 )		30 ug/L	08/25/2008
	LCSD	32.0	107		4	(< 20)	30 ug/L 08/25/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS		102	( 73-120 )			08/25/2008
	LCSD		98		3		08/25/2008
Toluene-d8 <surr>	LCS		101	( 80-120 )			08/25/2008
	LCSD		100		1		08/25/2008
4-Bromofluorobenzene <surr>	LCS		96	( 76-120 )			08/25/2008
	LCSD		95		1		08/25/2008



SGS Ref.# 851791 Lab Control Sample  
851792 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
Prep Batch VXX18631  
Method SW5030B  
Date 08/25/2008

Parameter	QC Results	Pet Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Batch VMS10055  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 851898 Lab Control Sample  
 851899 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18633  
 Method SW5030B  
 Date 08/26/2008

QC results affect the following production samples:

1084936001, 1084936002, 1084936003, 1084936004, 1084936005, 1084936006, 1084936007, 1084936008, 1084936009, 1084936010, 1084936011

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Fuels Department</b>							
Benzene	LCS	0.0985	99	( 80-120 )		0.100 mg/L	08/26/2008
	LCSD	0.0975	98		1 (< 20)	0.100 mg/L	08/26/2008
Toluene	LCS	0.0998	100	( 80-120 )		0.100 mg/L	08/26/2008
	LCSD	0.0992	99		1 (< 20)	0.100 mg/L	08/26/2008
Ethylbenzene	LCS	0.102	102	( 87-125 )		0.100 mg/L	08/26/2008
	LCSD	0.101	101		1 (< 20)	0.100 mg/L	08/26/2008
o-Xylene	LCS	0.0983	98	( 85-120 )		0.100 mg/L	08/26/2008
	LCSD	0.0978	98		1 (< 20)	0.100 mg/L	08/26/2008
P & M -Xylene	LCS	0.201	100	( 87-125 )		0.200 mg/L	08/26/2008
	LCSD	0.199	100		1 (< 20)	0.200 mg/L	08/26/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		100	( 80-120 )			08/26/2008
	LCSD		99		2		08/26/2008

Batch VFC9133  
 Method AK101  
 Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 851898 Lab Control Sample  
 851899 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18633  
 Method SW5030B  
 Date 08/26/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS 98.5	99	( 80-120 )			100 ug/L	08/26/2008
	LCSD 97.5	98		1	(< 20 )	100 ug/L	08/26/2008
Toluene	LCS 99.8	100	( 80-120 )			100 ug/L	08/26/2008
	LCSD 99.2	99		1	(< 20 )	100 ug/L	08/26/2008
Ethylbenzene	LCS 102	102	( 87-125 )			100 ug/L	08/26/2008
	LCSD 101	101		1	(< 20 )	100 ug/L	08/26/2008
o-Xylene	LCS 98.3	98	( 85-120 )			100 ug/L	08/26/2008
	LCSD 97.8	98		1	(< 20 )	100 ug/L	08/26/2008
P & M -Xylene	LCS 201	100	( 87-125 )			200 ug/L	08/26/2008
	LCSD 199	100		1	(< 20 )	200 ug/L	08/26/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <sur>	LCS	100	( 80-120 )				08/26/2008
	LCSD	99		2			08/26/2008

Batch VFC9133  
 Method SW8021B  
 Instrument HP 5890 Series II PID+FID VCA



**SGS Ref.#** 851900 Lab Control Sample  
 851901 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Prep Batch** VXX18633  
**Method** SW5030B  
**Date** 08/26/2008

QC results affect the following production samples:

1084936001, 1084936002, 1084936003, 1084936004, 1084936005, 1084936006, 1084936007, 1084936008, 1084936009, 1084936010, 1084936011

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	0.210	105	( 60-120 )		0.200 mg/L	08/26/2008
	LCSD	0.206	103		2	(< 20 )	0.200 mg/L 08/26/2008
<b>Surrogates</b>							
4-Bromofluorobenzene <surr>	LCS		103	( 50-150 )			08/26/2008
	LCSD		105		1		08/26/2008

**Batch** VFC9133  
**Method** AK101  
**Instrument** HP 5890 Series II PID+FID VCA





SGS Ref.# 851950 Lab Control Sample  
 851951 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/04/2008 14:15  
 Prep Batch VXX18637  
 Method SW5030B  
 Date 08/26/2008

QC results affect the following production samples:

1084936006, 1084936008, 1084936010

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
Benzene	LCS	30.3	101	( 80-120 )		30 ug/L	08/26/2008
	LCSD	28.0	93		8 (< 20)	30 ug/L	08/26/2008
Ethylbenzene	LCS	33.4	111	( 80-120 )		30 ug/L	08/26/2008
	LCSD	30.4	101		10 (< 20)	30 ug/L	08/26/2008
Dichlorodifluoromethane	LCS	30.3	101	( 62-153 )		30 ug/L	08/26/2008
	LCSD	28.3	94		7 (< 20)	30 ug/L	08/26/2008
P & M -Xylene	LCS	67.4	112	( 80-120 )		60 ug/L	08/26/2008
	LCSD	62.1	103		8 (< 20)	60 ug/L	08/26/2008
o-Xylene	LCS	33.1	110	( 80-120 )		30 ug/L	08/26/2008
	LCSD	31.0	103		7 (< 20)	30 ug/L	08/26/2008
1,2,4-Trimethylbenzene	LCS	33.2	111	( 80-125 )		30 ug/L	08/26/2008
	LCSD	31.1	104		7 (< 20)	30 ug/L	08/26/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS		99	( 73-120 )			08/26/2008
	LCSD		98		0		08/26/2008
Toluene-d8 <surr>	LCS		100	( 80-120 )			08/26/2008
	LCSD		101		1		08/26/2008
4-Bromofluorobenzene <surr>	LCS		96	( 76-120 )			08/26/2008
	LCSD		96		0		08/26/2008

Batch VMS10057  
 Method SW8260B  
 Instrument HP 5890 Series II MS3 VNA



**SGS Ref.#** 852166 Lab Control Sample  
 852167 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/04/2008 14:15  
**Prep Batch** XXX19931  
**Method** SW3520C  
**Date** 08/27/2008

QC results affect the following production samples:

1084936001, 1084936002, 1084936003, 1084936004, 1084936005, 1084936006, 1084936007, 1084936008, 1084936009, 1084936010

Parameter	QC Results	Pet Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Semivolatile Organic Fuels Department</u></b>							
Diesel Range Organics	LCS	21.0	105	( 75-125 )		20 mg/L	09/03/2008
	LCSD	20.7	104		1 (< 20)	20 mg/L	09/03/2008
<b>Surrogates</b>							
5a Androstane <surr>	LCS		118	( 60-120 )			09/03/2008
	LCSD		120		2		09/03/2008

**Batch** XFC8158  
**Method** AK102  
**Instrument** HP 5890 Series II FID SV D R

**Shannon & Wilson, Inc.**  
 400 N. 34th Street, Suite 100 | 1150 Olive Blvd., Suite 276  
 Seattle, WA 98103 | St. Louis, MO 63141  
 (206) 632-8020 | (314) 872-8170  
 2355 Hill Road | 5430 Fairbanks Street, Suite 3  
 Fairbanks, AK 99707 | Anchorage, AK 99518  
 (907) 479-0600 | (907) 561-2120

1084936



**custody Record**

**Analysis Parameters/Sample Container Description**  
 (include preservative if used)

Page 1 of 2  
 Laboratory SGS  
 Attn:

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRD 101	SPB	AKK 102	GR01BTEX	VOL 62608	Total Number of Containers	Remarks/Matrix
MW-1	① A-E	13:16	8/21/08	X	X	X	X	X	X	X	5	Water
MW-2	②	14:05		X	X	X	X	X	X	X	5	
MW-3	③	15:26		X	X	X	X	X	X	X	5	
MW-4	④	16:14		X	X	X	X	X	X	X	5	
MW-5	⑤	17:00		X	X	X	X	X	X	X	5	
MW-6	⑥ A-H	16:54	8/21/08	X	X	X	X	X	X	X	8	
MW-7	⑦	11:40		X	X	X	X	X	X	X	8	
MW-8	⑧	13:14		X	X	X	X	X	X	X	8	
MW-9	⑨ A-E	13:52		X	X	X	X	X	X	X	5	
MW-80	⑩ A-H	13:20		X	X	X	X	X	X	X	8	

Project Information	Sample Receipt	Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Project Number: 31-1-1417-001	Total Number of Containers: 65	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
Project Name: NWL AIR	COC Seals/Intact? Y/N/NA	Time: 15:10	Time: 10:50	Time: <i>[Blank]</i>
Contact: DON LINSTON	Received Good Cond./Cold	Date: 8/21/08	Date: 8/21/08	Date: <i>[Blank]</i>
Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Delivery Method: <i>[Blank]</i>	Printed Name: KRISTEN R WILLIAMS	Printed Name: CARMON BEENE	Printed Name: <i>[Blank]</i>
Sampler: RNS/IRDG	(attach shipping bill, if any)	Company: SHANNON & WILSON	Company: SAS	Company: <i>[Blank]</i>
<b>Instructions</b>				
Requested Turn Around Time: <i>[Blank]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
Special Instructions: <i>Level II deliverables</i>	Time: 15:10	Time: 10:50	Time: 09:00	Time: <i>[Blank]</i>
	Date: 8/21/08	Date: 8/21/08	Date: 8/21/08	Date: 8/21/08
	Printed Name: CARMON BEENE	Printed Name: CARMON BEENE	Printed Name: <i>[Blank]</i>	Printed Name: <i>[Blank]</i>
	Company: SAS	Company: SAS	Company: <i>[Blank]</i>	Company: <i>[Blank]</i>

PNXB C=5.8  
 TB=2.8

1150 Olive Blvd., Suite 2  
 St. Louis, MO 63141  
 (314) 872-8170  
 5430 Fairbanks Street, S  
 Anchorage, AK 99518  
 (907) 479-0600

1084936

f Custody Recoil

Analysis Param

1084936

Page 2 of 2  
 Laboratory SCS  
 Attn:



Ion

Sample Identity	Lab No.	Time	Date Sampled	Comp.		Remarks/Matrix
				Grab	Total Number of Containers	
Trip Blanks	① A.C	-	-	X	3	water

GRAB VOC 8260  
 GROSS EX 8218

Project Information		Sample Receipt	
Project Number: 31-1417-061	Total Number of Containers: 65		
Project Name: For Mr. Mark A. If	COC Seals/Intact? Y/N/NA		
Contact: Jon Liberton	Received Good Cond./Cold		
Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Delivery Method: Hand		
Sampler: RW/IRDG	(attach shipping bill, if any)		
Instructions			
Requested Turn Around Time: Std.	Special Instructions: Level II Deliverables		

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <i>[Signature]</i> Printed Name: Kristen R. Williams Company: Shannon & Wilson	Signature: <i>[Signature]</i> Printed Name: CARMON BEANE Company: SCS	Signature: <i>[Signature]</i> Printed Name: <i>[Signature]</i> Company: SCS
Time: 15:10 Date: 8/21/08	Time: 15:10 Date: 8/21/08	Time: 09:40 Date: 8/22/08

Distribution: White - w/shipment - returned to Shannon & Wilson w/ Laboratory report  
 Yellow - w/shipment - for consignee files  
 Pink - Shannon & Wilson - Job File



1084936

SGS WO#:



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: 8-22-08 6940
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 / Carlile / Lynden / SGS
Other: \_\_\_\_\_
Airbill # \_\_\_\_\_

COOLER AND TEMP BLANK READINGS\* 70 d
Table with 6 columns: Cooler ID, Temp Blank (°C), Cooler (°C), Cooler ID, Temp Blank (°C), Cooler (°C). Handwritten data: (1, 2.1, 2.6), (2, 4.7, 2.8)

CUSTODY SEALS INTACT: YES / NO
#1 WHERE: TWO ON FRONT AND BACK TOP LID X 2

COMPLETED BY: [Signature]

\*Temperature readings include thermometer correction factors.



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: 9/21/08

Received Time: 1510

Is date/time conversion necessary? N/A

# of hours to AK Local Time: N/A

Thermometer ID: FBX10

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>2.8°C</u>	<u>5.0°C</u>
_____	_____°C	_____°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 / Carlisle /
- 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 out for DoD projects (USACE, Navy, AFCEE)**

Yes	No	Is received temperature 4 ± 2°C?	Exceptions:	Samples/Analyses Affected:
_____	_____	_____	_____	_____
_____	_____	If temperature(s) <0°C, were containers ice-free? <u>N/A</u>	<i>Notify PM immediately of any ice in samples.</i>	
_____	_____	Was there an airbill? (Note # above in the right hand column)	_____	
_____	_____	Was cooler sealed with custody seals?	# / where: _____	
_____	_____	Were seal(s) intact upon arrival?	_____	
_____	_____	Was there a COC with cooler?	_____	
_____	_____	Was COC sealed in plastic bag & taped inside lid of cooler?	_____	
_____	_____	Was the COC filled out properly?	_____	
_____	_____	Did the COC indicate USACE / Navy / AFCEE project?	_____	
_____	_____	Did the COC and samples correspond?	_____	
_____	_____	Were all sample packed to prevent breakage?	_____	
_____	_____	Packing material: _____	_____	
_____	_____	Were all samples unbroken and clearly labeled?	_____	
_____	_____	Were all samples sealed in separate plastic bags?	_____	
_____	_____	Were all VOCs free of headspace and/or MeOH preserved?	_____	
_____	_____	Were correct container / sample sizes submitted?	_____	
_____	_____	Is sample condition good?	_____	
_____	_____	Was copy of CoC, SRF, and custody seals given to PM to fax?	_____	

**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: \_\_\_\_\_

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Completed by (sign): CARMON BOENE (print): CARMON BOENE  
 Login proof (check one): waived \_\_\_\_\_ required  performed by: [Signature]

SAMPLE RECEIPT FORM (page 2)

SGS WO#:

#	Container ID	Matrix	Test	QC	TB	Container Volume								Container Type							Preservative													
						1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other	AG	CG	HDPE	Nalgene	Cubic	Coll	Septa	Other	None	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	MeOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	NaOH	Other				
1-59	A-C D,E	1	GRO BIEX DRO					12		18								1									✓							
6-80	A-C D-F G,H	1	GRO VOC DRO					8		12 12								1									✓	✓						
11	A-E B-C	1	GRO BIEX VOC							1 2								1									✓	✓						

Bottle Totals	20	45
---------------	----	----

Completed by: *[Signature]* Date: 8-22-08

**SGS** Environmental  
Signature: Cannon Beene CUSTODY SEAL W# 4936  
Date/Time: 8/21/08 1645

102 TB = 2.1  
C = 2.6

1084936

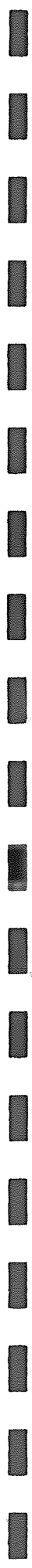
**SGS** Environmental  
Signature: Cannon Beene CUSTODY SEAL W# 4936  
Date/Time: 8/21/08 1645

**SGS** Environmental  
Signature: Cannon Beene CUSTODY SEAL W# 4936, 4937  
Date/Time: 8/21/08 1645

102 TB = 4.7  
C = 2.8

**SGS** Environmental  
Signature: Cannon Beene CUSTODY SEAL W# 4936, 4937  
Date/Time: 8/21/08 1645





## LABORATORY DATA REVIEW CHECKLIST

(NOTE: NA = not applicable)

### 1. Laboratory

- a. Did an ADEC CS-approved laboratory receive and perform all of the submitted sample analyses?  Yes / No
- 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 /  NA

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?  Yes / No
- b. Were the correct analyses requested?  Yes / No

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ}$  C)?  Yes / No
- b. Sample preservation acceptable - acidified waters, MeOH-preserved VOC soil (GRO, BTEX, VOCs, etc.)?  Yes / No
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)?  NA / Yes / No
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)?  NA / Yes / No
- e. Data quality or usability affected? Yes (explain)  No

### 4. Case Narrative

- a. Present and understandable?  Yes / No (explain)
- b. Discrepancies, errors or QC failures noted by the lab? NA  Yes / No (explain)
- c. Were all corrective actions documented?  NA / Yes / No (explain) – Note: No corrective actions were required.

SGS Work Order Number: 1084936

- d. Is there an effect on data quality/usability, according to the case narrative? NA /  **Yes (explain)** – **Note: the case narrative indicates the Initial Calibration Verifications (ICVs) for dichlorodifluoromethane were biased high, and the results for this analyte in associated samples are estimated. The associated samples were MW-6, MW-8, and MW-80.**

## 5. Sample Results

- a. Correct analyses performed/reported as requested on COC?  **Yes** / No (explain)
- b. All applicable holding times met?  **Yes** / No
- c. All soils reported on a dry-weight basis?  **NA** / Yes / No
- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?  **Yes** / No (explain only for non-detects with elevated PQLs)
- e. Data quality or usability affected?  **No** / Yes (explain)

## 6. QC Samples

### **a. Method Blank**

- i. Is at least one method blank (MB) reported per matrix, analysis, and 20 samples?  **Yes** / No
- ii. Are all method blank results less than PQL?  **Yes** / No
- iii. If MB above PQL, what samples are affected?
- iv. Do the affected sample(s) have data flags? Yes / No  **NA**  
If so, are the data flags clearly defined? Yes / No  **NA**
- v. Are data quality or usability affected?  **No** (i.e., MB data are acceptable) / Yes (Explain)

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

- i. Organics - Is at least one LCS/LCSD reported per matrix, analysis, and 20 samples?  
NA  **Yes** / No
- ii. Metals/Inorganics - Is at least one LCS and one sample duplicate reported per matrix, analysis and 20 samples? NA  **Yes** / No
- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DOOs? [AK petroleum methods %R < 20%; other analyses, refer to lab QC pages] Yes  **No** (explain) – **Note: the LCSD recovery for dichlorodifluoromethane was below the laboratory's limit. As noted above, this analyte's ICVs were biased high.**

SGS Work Order Number: 1084936

**The results were for this analyte in samples *MW-6, MW-7, MW-8, MW-80*, and the trip blank should be considered estimates.**

- iv. Precision – Are all relative percent differences (RPDs) reported and less than method or laboratory limits, or project-specified DQOs? Yes  No (explain) – Note: the RPD for dichlorodifluoromethane was above laboratory limits.
- v. If %R or RPD is outside of acceptable limits, what samples are affected? NA or  list – Note: samples *MW-6, MW-7, MW-8, MW-80*, and the trip blank were affected.
- vi. Do the affected samples(s) have data flags? NA  Yes / No (explain)

If so, are the data flags clearly defined? Yes

- vii. Is the data quality or usability affected? No or  explain – Note: the dichlorodifluoromethane concentrations for samples *MW-6, MW-7, MW-8, MW-80*, and the trip blank should be considered estimates.

**c. Surrogates - Organics Only**

- i. Are surrogate recoveries reported for organic analyses, including field, QC and laboratory samples?  Yes / No
- ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? Yes  No
- iii. Do the sample results with failed surrogate recoveries have data flags? NA  Yes / No (explain)

If so, are the data flags clearly defined?  Yes / No / NA

- iv. Is the data quality or usability affected? No or  explain – Note: the GRO surrogate in samples *MW-8* and *MW-80* was recovered above the laboratory control limit due to hydrocarbon interference. The LCS analyses associated with these samples were acceptable, and the GRO results should be considered accurate.

**d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)**

- i. Is at least one trip blank (TB) reported per matrix, analysis and cooler? NA /  Yes / No
- ii. Are all results less than the PQL? NA /  Yes / No
- iii. If TB is above the PQL, what samples are affected?  NA or list samples
- iv. Is the data quality or usability affected?  No or explain.

**e. Field Duplicate**

i. Was at least one field duplicate submitted per matrix, analysis and 10 project samples?

Yes/ No – Note: duplicate samples were collected from well MW-8.

ii. Were the field duplicates submitted blind to the lab?  Yes/ No / NA

iii. Precision – Are all relative percent differences (RPDs) less than specified DQOs (recommended: 30% for water, 50% for soil) ?  Yes/ No / NA

iv. Is the data quality or usability affected?  No/ Yes (explain)

**f. Decontamination or Equipment Blank (if applicable)**

Not Applicable or...

i. Are all results less than the PQL? Yes / No

ii. If results are above PQL, what samples are affected? NA or list

iii. Is the data quality or usability affected? Explain.

**7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)**

Not applicable or ...

a. Are they defined and appropriate? Yes / No

**Completed by:** Jon Lindstrom, Ph.D.

**Title:** Chemist

**Date:** November 5, 2008

**Consultant Firm:** Shannon & Wilson, Inc.

**CS Report Name:** Groundwater Investigation

**Laboratory Report Date:** September 4, 2008

**Laboratory Name:** SGS Environmental Services, Inc.

**Laboratory Report Numbers:** 1084936

**ADEC File Number:** 100.26.043

**ADEC Hazard ID:** 22871



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

Project: 31-1-11417-002 Mark Air  
Client: Shannon & Wilson-Fairbanks  
SGS Work Order: 1084993

Released by:

**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.



Case Narrative

Client SHANFBK Shannon & Wilson-Fairbanks  
Workorder 1084993 31-1-11417-002 Mark Air

Printed Date/Time 10/1/2008 16:23

Sample ID Client Sample ID

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

1084993001 PS 1417-090908-001

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.

AK102 - The sample was extracted one day outside of hold time.

AK102 - The pattern is consistent with a weathered middle distillate.

1084993002 PS 1417-090908-002

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.

AK102 - The sample was extracted one day outside of hold time.

AK102 - The pattern is consistent with a weathered middle distillate.

1084993003 PS 1417-090908-003

AK102 - The sample was extracted one day outside of hold time.

1084993004 PS 1417-090908-004

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.

AK102 - The sample was extracted one day outside of hold time.

AK102 - The pattern is consistent with a weathered middle distillate.

1084993005 PS 1417-091108-005

AK102 - The sample was diluted due to the dark color; therefore the PQL was elevated.

857831 LCS LCS for HBN 206203 [VXX/18726]

8260B - LCS recovery for dichlorodifluoromethane does not meet QC criteria (biased high). This analyte was not detected in the associated samples.

857833 MS 1084929001(857832MS)

8260B - MS/MSD recoveries for vinyl chloride and dichlorodifluoromethane do not meet QC criteria (biased high). These analytes were not detected in the associated samples.

857834 MSD 1084929001(857832MSD)

8260B - MS/MSD recoveries for vinyl chloride and dichlorodifluoromethane do not meet QC criteria (biased high). These analytes were not detected in the associated samples

857839 CCV CCV for HBN 206205 (VMS/10111)

8260B - CCV recoveries for several analytes do not meet QC criteria (biased high). These analytes were not detected in the associated samples.

857966 MB MB for HBN 206227 [VXX/18729]

MB - result for benzene is greater than one-half the PQL but less than PQL.

Client SHANFBK Shannon & Wilson-Fairbanks  
Vorkorder 1084993 31-1-11417-002 Mark Air

Printed Date/Time 10/1/2008 16:23

Sample ID		Client Sample ID
858278	LCS	LCS for HBN 206289 [VXX/18734]
	8260B - LCS recovery for dichlorodifluoromethane does not meet QC criteria (biased high). This analyte was not detected in the associated samples.	
858279	MS	08FTW348-118A(1085018011MS)
	8260B - MS/MSD recoveries for dichlorodifluoromethane and vinyl chloride do not meet QC criteria (biased high). See LCS for accuracy.	
858280	MSD	08FTW348-118A(1085018011MSD)
	8260B - MS/MSD recoveries for dichlorodifluoromethane and vinyl chloride do not meet QC criteria (biased high). See LCS for accuracy.	
	8260B - MSD/RPD result for chloroethane do not meet QC criteria. This analyte was not detected in the associated samples.	
858348	CCV	CCV for HBN 206297 (VMS/10117)
	8260B - CCV recoveries for several analytes do not meet QC criteria (biased high). These analytes were not detected in the associated samples.	
858595	MSD	1085018011(858854MSD)
	8260B - MSD recovery for naphthalene does not meet QC criteria (biased high). See LCS for accuracy.	
858895	MB	MB for HBN 206408 [VXX/18746]
	MB - result for benzene is greater than one-half the PQL but less than PQL.	



200 W. Potter Drive  
Anchorage, AK 99518-1605  
Tel: (907) 562-2343  
Fax: (907) 561-5301  
Web: <http://www.us.sgs.com>

Julie Keener  
Shannon & Wilson-Fairbanks  
2355 Hill Rd  
Fairbanks, AK 99709

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<b>Work Order:</b>	1084993	
	31-1-11417-002 Mark Air	<b>Released by:</b>
<b>Client:</b>	Shannon & Wilson-Fairbanks	
<b>Report Date:</b>	October 01, 2008	

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Enclosed are the analytical results associated with the above 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), UST-005 (CS) and AK00971 (Micro) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 9065, 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 other 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.

PQL	Practical Quantitation Limit (reporting 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.
GT	Greater Than
D	The analyte concentration is the result of a dilution.
LT	Less Than
!	Surrogate out of control limits.
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
JL	The analyte was positively identified, but the quantitation is a low estimation.
E	The analyte result is above the calibrated range.
R	Rejected

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.



SGS Ref.# 1084993001  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Client Sample ID 1417-090908-001  
 Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
 Collected Date/Time 09/09/2008 9:45  
 Received Date/Time 09/16/2008 9:40  
 Technical Director Stephen C. Ede

Sample Remarks:

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
 AK102 - The sample was extracted one day outside of hold time.  
 AK102 - The pattern is consistent with a weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
-----------	---------	-----	-------	--------	--------------	------------------	-----------	---------------	------

**Volatile Fuels Department**

Gasoline Range Organics	233	25.5	mg/Kg	AK101	A		09/09/08	09/20/08	HM
-------------------------	-----	------	-------	-------	---	--	----------	----------	----

**Surrogates**

4-Bromofluorobenzene <surr>	751	!	%	AK101	A	50-150	09/09/08	09/20/08	HM
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**Semivolatile Organic Fuels Department**

Diesel Range Organics	582	24.0	mg/Kg	AK102	B		09/24/08	09/25/08	BME
-----------------------	-----	------	-------	-------	---	--	----------	----------	-----

**Surrogates**

5a Androstane <surr>	64.7		%	AK102	B	50-150	09/24/08	09/25/08	BME
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**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	3.03	0.306	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Toluene	22.9	1.02	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Ethylbenzene	8.22	0.510	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
n-Butylbenzene	0.755	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Carbon disulfide	ND	0.102	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,4-Dichlorobenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2-Dichloroethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,3,5-Trimethylbenzene	5.18	0.510	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Chlorotoluene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Chlorobenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
4-Methyl-2-pentanone (MIBK)	ND	0.255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
cis-1,2-Dichloroethene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
4-Isopropyltoluene	0.424	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW



**SGS Ref.#** 1084993001  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-001  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 9:45  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Methyl-t-butyl ether	ND	0.0408	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
cis-1,3-Dichloropropene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
n-Propylbenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Styrene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Dibromomethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
trans-1,3-Dichloropropene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2,4-Trichlorobenzene	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1,2,2-Tetrachloroethane	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2-Dibromo-3-chloropropane	ND	0.102	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Tetrachloroethene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Dibromochloromethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,3-Dichloropropane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2-Dibromoethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Carbon tetrachloride	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1,1,2-Tetrachloroethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Chloroform	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Bromobenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Chloromethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2,3-Trichloropropane	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Bromomethane	ND	0.204	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Bromochloromethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Vinyl chloride	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Dichlorodifluoromethane	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Chloroethane	ND	0.204	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
sec-Butylbenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Bromodichloromethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1-Dichloroethene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
2-Butanone (MEK)	ND	0.255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Methylene chloride	ND	0.102	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Trichlorofluoromethane	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW



**SGS Ref.#** 1084993001  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-001  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 9:45  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
P & M -Xylene	32.9	1.02	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Naphthalene	6.97	1.02	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
o-Xylene	16.6	1.02	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromoform	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Xylenes (total)	49.5	2.04	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,4-Trimethylbenzene	20.1	0.510	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
tert-Butylbenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1,1-Trichloroethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1-Dichloroethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
2-Chlorotoluene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Trichloroethene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
trans-1,2-Dichloroethene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2-Dichlorobenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
2,2-Dichloropropane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Hexachlorobutadiene	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
Isopropylbenzene (Cumene)	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
2-Hexanone	ND	0.255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2-Dichloropropane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1-Dichloropropene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,1,2-Trichloroethane	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,3-Dichlorobenzene	ND	0.0255	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
1,2,3-Trichlorobenzene	ND	0.0510	mg/Kg	SW8260B	A		09/09/08	09/18/08	KPW
<b><u>Surrogates</u></b>									
1,2-Dichloroethane-D4 <surr>	87.9		%	SW8260B	A	80-137	09/09/08	09/18/08	KPW
Toluene-d8 <surr>	107		%	SW8260B	A	80-122	09/09/08	09/18/08	KPW
4-Bromofluorobenzene <surr>	98.6		%	SW8260B	A	42-147	09/09/08	09/18/08	KPW
<b><u>Solids</u></b>									
Total Solids	82.0		%	SM20 2540G	B			09/19/08	BME



SGS Ref.# 1084993001  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-001  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 9:45  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

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Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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Solids



SGS Ref.# 1084993002  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Client Sample ID 1417-090908-002  
 Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
 Collected Date/Time 09/09/2008 13:15  
 Received Date/Time 09/16/2008 9:40  
 Technical Director Stephen C. Ede

Sample Remarks:

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
 AK102 - The sample was extracted one day outside of hold time.  
 AK102 - The pattern is consistent with a weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	481	29.7	mg/Kg	AK101	A		09/09/08	09/20/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	1170	!	%	AK101	A	50-150	09/09/08	09/20/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	33.7	25.2	mg/Kg	AK102	B		09/24/08	09/25/08	BME
<b><u>Surrogates</u></b>									
5a Androstane <surr>	64.3		%	AK102	B	50-150	09/24/08	09/25/08	BME
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	11.3	0.356	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Toluene	77.8	5.93	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
Ethylbenzene	17.2	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
n-Butylbenzene	1.29	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Carbon disulfide	ND	11.9	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
1,4-Dichlorobenzene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dichloroethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,3,5-Trimethylbenzene	9.38	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Chlorotoluene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chlorobenzene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Methyl-2-pentanone (MIBK)	ND	5.93	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
cis-1,2-Dichloroethene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Isopropyltoluene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW



SGS Ref.# 1084993002  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-002  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 13:15  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Methyl-t-butyl ether	ND	0.949	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
cis-1,3-Dichloropropene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
n-Propylbenzene	6.30	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Styrene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Dibromomethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
trans-1,3-Dichloropropene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,4-Trichlorobenzene	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,2,2-Tetrachloroethane	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dibromo-3-chloropropane	ND	2.37	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Tetrachloroethene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Dibromochloromethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,3-Dichloropropane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dibromoethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Carbon tetrachloride	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,1,2-Tetrachloroethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chloroform	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromobenzene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,3-Trichloropropane	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chloromethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromomethane	ND	4.74	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromochloromethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Vinyl chloride	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Dichlorodifluoromethane	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chloroethane	ND	4.74	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
sec-Butylbenzene	0.925	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromodichloromethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1-Dichloroethene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2-Butanone (MEK)	ND	5.93	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Methylene chloride	ND	2.37	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Trichlorofluoromethane	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW



**SGS Ref.#** 1084993002  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-002  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 13:15  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
P & M -Xylene	54.1	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Naphthalene	9.36	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
o-Xylene	25.5	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromoform	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Xylenes (total)	79.6	2.37	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,4-Trimethylbenzene	33.5	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
tert-Butylbenzene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,1-Trichloroethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1-Dichloroethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2-Chlorotoluene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Trichloroethene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
trans-1,2-Dichloroethene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dichlorobenzene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2,2-Dichloropropane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Hexachlorobutadiene	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Isopropylbenzene (Cumene)	2.38	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2-Hexanone	ND	5.93	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dichloropropane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1-Dichloropropene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,2-Trichloroethane	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,3-Dichlorobenzene	ND	0.593	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,3-Trichlorobenzene	ND	1.19	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
<b><u>Surrogates</u></b>									
1,2-Dichloroethane-D4 <surr>	85.1		%	SW8260B	A	80-137	09/09/08	09/20/08	KPW
Toluene-d8 <surr>	108		%	SW8260B	A	80-122	09/09/08	09/20/08	KPW
4-Bromofluorobenzene <surr>	100		%	SW8260B	A	42-147	09/09/08	09/20/08	KPW
<b><u>Solids</u></b>									
Total Solids	79.4		%	SM20 2540G	B			09/19/08	BME





SGS Ref.# 1084993002  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-002  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 13:15  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

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Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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Solids



**SGS Ref.#** 1084993003  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-003  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 14:45  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede

**Sample Remarks:**

AK102 - The sample was extracted one day outside of hold time.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	2.93	mg/Kg	AK101	A		09/09/08	09/20/08	HM
<b>Surrogates</b>									
4-Bromofluorobenzene <surr>	94.1		%	AK101	A	50-150	09/09/08	09/20/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	25.2	mg/Kg	AK102	B		09/24/08	09/25/08	BME
<b>Surrogates</b>									
5a Androstane <surr>	71.4		%	AK102	B	50-150	09/24/08	09/25/08	BME
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	ND	0.0176	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Toluene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Ethylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
n-Butylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
Carbon disulfide	ND	0.117	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
1,4-Dichlorobenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dichloroethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,3,5-Trimethylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
4-Chlorotoluene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chlorobenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
4-Methyl-2-pentanone (MIBK)	ND	0.293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
cis-1,2-Dichloroethene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
4-Isopropyltoluene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
Methyl-t-butyl ether	ND	0.0469	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW



SGS Ref.# 1084993003  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-003  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 14:45  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
cis-1,3-Dichloropropene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
n-Propylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
Styrene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Dibromomethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
trans-1,3-Dichloropropene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,4-Trichlorobenzene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,2,2-Tetrachloroethane	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dibromo-3-chloropropane	ND	0.117	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Tetrachloroethene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Dibromochloromethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,3-Dichloropropane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dibromoethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Carbon tetrachloride	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,1,2-Tetrachloroethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chloroform	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromobenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chloromethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,3-Trichloropropane	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromomethane	ND	0.234	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromochloromethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Vinyl chloride	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Dichlorodifluoromethane	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chloroethane	ND	0.234	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
sec-Butylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromodichloromethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1-Dichloroethene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
2-Butanone (MEK)	ND	0.293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Methylene chloride	ND	0.117	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Trichlorofluoromethane	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
P & M -Xylene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW



**SGS Ref.#** 1084993003  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-003  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 14:45  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Volatile Gas Chromatography/Mass Spectroscopy**

Naphthalene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
o-Xylene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
Bromoform	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Xylenes (total)	ND	0.117	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
1,2,4-Trimethylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
tert-Butylbenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,1-Trichloroethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1-Dichloroethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
2-Chlorotoluene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Trichloroethene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
trans-1,2-Dichloroethene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dichlorobenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
2,2-Dichloropropane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Hexachlorobutadiene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Isopropylbenzene (Cumene)	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
2-Hexanone	ND	0.293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dichloropropane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1-Dichloropropene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,2-Trichloroethane	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,3-Dichlorobenzene	ND	0.0293	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,3-Trichlorobenzene	ND	0.0586	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW

**Surrogates**

1,2-Dichloroethane-D4 <surr>	89.6		%	SW8260B	A	80-137	09/09/08	09/19/08	KPW
Toluene-d8 <surr>	109		%	SW8260B	A	80-122	09/09/08	09/19/08	KPW
4-Bromofluorobenzene <surr>	97.3		%	SW8260B	A	42-147	09/09/08	09/19/08	KPW

**Solids**

Total Solids	77.7		%	SM20 2540G	B			09/19/08	BME
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**SGS Ref.#** 1084993003  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-003  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 14:45  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede



SGS Ref.# 1084993004  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Client Sample ID 1417-090908-004  
 Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
 Collected Date/Time 09/09/2008 13:20  
 Received Date/Time 09/16/2008 9:40  
 Technical Director Stephen C. Ede

Sample Remarks:

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
 AK102 - The sample was extracted one day outside of hold time.  
 AK102 - The pattern is consistent with a weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	440	40.6	mg/Kg	AK101	A		09/09/08	09/20/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	837	!	%	AK101	A	50-150	09/09/08	09/20/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	35.1	25.1	mg/Kg	AK102	B		09/24/08	09/25/08	BME
<b><u>Surrogates</u></b>									
5a Androstane <surr>	60.7		%	AK102	B	50-150	09/24/08	09/25/08	BME
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	5.33	0.487	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Toluene	44.1	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Ethylbenzene	13.9	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
n-Butylbenzene	2.17	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Carbon disulfide	ND	3.24	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
1,4-Dichlorobenzene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dichloroethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,3,5-Trimethylbenzene	11.3	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Chlorotoluene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chlorobenzene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Methyl-2-pentanone (MIBK)	ND	8.11	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
cis-1,2-Dichloroethene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
4-Isopropyltoluene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW



SGS Ref.# 1084993004  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-004  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 13:20  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Methyl-t-butyl ether	ND	1.30	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
cis-1,3-Dichloropropene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
n-Propylbenzene	7.07	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Styrene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Dibromomethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
trans-1,3-Dichloropropene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,4-Trichlorobenzene	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,2,2-Tetrachloroethane	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dibromo-3-chloropropane	ND	3.24	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Tetrachloroethene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Dibromochloromethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,3-Dichloropropane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dibromoethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Carbon tetrachloride	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,1,2-Tetrachloroethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chloroform	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromobenzene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,3-Trichloropropane	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chloromethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromomethane	ND	6.49	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromochloromethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Vinyl chloride	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Dichlorodifluoromethane	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Chloroethane	ND	6.49	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
sec-Butylbenzene	1.28	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromodichloromethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1-Dichloroethene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2-Butanone (MEK)	ND	8.11	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Methylene chloride	ND	3.24	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Trichlorofluoromethane	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW



**SGS Ref.#** 1084993004  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Client Sample ID** 1417-090908-004  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Collected Date/Time** 09/09/2008 13:20  
**Received Date/Time** 09/16/2008 9:40  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
P & M -Xylene	45.3	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Naphthalene	7.90	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
o-Xylene	19.9	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Bromoform	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Xylenes (total)	65.1	3.24	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,4-Trimethylbenzene	37.6	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
tert-Butylbenzene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,1-Trichloroethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1-Dichloroethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2-Chlorotoluene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Trichloroethene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
trans-1,2-Dichloroethene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dichlorobenzene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2,2-Dichloropropane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Hexachlorobutadiene	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
Isopropylbenzene (Cumene)	2.54	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
2-Hexanone	ND	8.11	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2-Dichloropropane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1-Dichloropropene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,1,2-Trichloroethane	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,3-Dichlorobenzene	ND	0.811	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
1,2,3-Trichlorobenzene	ND	1.62	mg/Kg	SW8260B	A		09/09/08	09/20/08	KPW
<b><u>Surrogates</u></b>									
1,2-Dichloroethane-D4 <surr>	86.2		%	SW8260B	A	80-137	09/09/08	09/20/08	KPW
Toluene-d8 <surr>	105		%	SW8260B	A	80-122	09/09/08	09/20/08	KPW
4-Bromofluorobenzene <surr>	101		%	SW8260B	A	42-147	09/09/08	09/20/08	KPW
<b><u>Solids</u></b>									
Total Solids	79.3		%	SM20 2540G	B			09/19/08	BME





SGS Ref.# 1084993004  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-004  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 13:20  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

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Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Solids**



SGS Ref.# 1084993005  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Client Sample ID 1417-091108-005  
 Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
 Collected Date/Time 09/11/2008 10:00  
 Received Date/Time 09/16/2008 9:40  
 Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The sample was diluted due to the dark color; therefore the PQL was elevated.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	3.48	mg/Kg	AK101	A		09/11/08	09/19/08	HM
Benzene	ND	0.0174	mg/Kg	SW8021B	A		09/11/08	09/19/08	HM
Toluene	ND	0.0696	mg/Kg	SW8021B	A		09/11/08	09/19/08	HM
Ethylbenzene	ND	0.0696	mg/Kg	SW8021B	A		09/11/08	09/19/08	HM
o-Xylene	ND	0.0696	mg/Kg	SW8021B	A		09/11/08	09/19/08	HM
P & M -Xylene	ND	0.0696	mg/Kg	SW8021B	A		09/11/08	09/19/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	96		%	AK101	A	50-150	09/11/08	09/19/08	HM
1,4-Difluorobenzene <surr>	93.3		%	SW8021B	A	80-120	09/11/08	09/19/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	107	mg/Kg	AK102	B		09/24/08	09/25/08	BME
<b><u>Surrogates</u></b>									
5a Androstane <surr>	74.7		%	AK102	B	50-150	09/24/08	09/25/08	BME
<b><u>Solids</u></b>									
Total Solids	73.7		%	SM20 2540G	B			09/19/08	BME



SGS Ref.# 1084993006  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-091108-006  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/11/2008 13:00  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	3.31	mg/Kg	AK101	A		09/11/08	09/20/08	HM
Benzene	0.189	0.0165	mg/Kg	SW8021B	A		09/11/08	09/20/08	HM
Toluene	ND	0.0662	mg/Kg	SW8021B	A		09/11/08	09/20/08	HM
Ethylbenzene	0.489	0.0662	mg/Kg	SW8021B	A		09/11/08	09/20/08	HM
o-Xylene	ND	0.0662	mg/Kg	SW8021B	A		09/11/08	09/20/08	HM
P & M -Xylene	0.0823	0.0662	mg/Kg	SW8021B	A		09/11/08	09/20/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	124		%	AK101	A	50-150	09/11/08	09/20/08	HM
1,4-Difluorobenzene <surr>	95.5		%	SW8021B	A	80-120	09/11/08	09/20/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	27.2	mg/Kg	AK102	B		09/24/08	09/25/08	BME
<b><u>Surrogates</u></b>									
5a Androstane <surr>	66.1		%	AK102	B	50-150	09/24/08	09/25/08	BME
<b><u>Solids</u></b>									
Total Solids	72.8		%	SM20 2540G	B			09/19/08	BME



SGS Ref.# 1084993007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-TB  
Matrix Solid/Soil (Wet Weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 9:45  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	2.64	mg/Kg	AK101	A		09/09/08	09/20/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surrogate>	95.2		%	AK101	A	50-150	09/09/08	09/20/08	HM
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	ND	0.0159	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Toluene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Ethylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
n-Butylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Carbon disulfide	ND	0.106	mg/Kg	SW8260B	A		09/09/08	09/22/08	KPW
1,4-Dichlorobenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dichloroethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,3,5-Trimethylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
4-Chlorotoluene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chlorobenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
4-Methyl-2-pentanone (MIBK)	ND	0.264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
cis-1,2-Dichloroethene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
4-Isopropyltoluene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
cis-1,3-Dichloropropene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
n-Propylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Styrene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Dibromomethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
trans-1,3-Dichloropropene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,4-Trichlorobenzene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,2,2-Tetrachloroethane	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dibromo-3-chloropropane	ND	0.106	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW



SGS Ref.# 1084993007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-TB  
Matrix Solid/Soil (Wet Weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 9:45  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Methyl-t-butyl ether	ND	0.0423	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Tetrachloroethene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Dibromochloromethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,3-Dichloropropane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dibromoethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Carbon tetrachloride	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,1,2-Tetrachloroethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chloroform	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromobenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,3-Trichloropropane	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chloromethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromomethane	ND	0.211	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromochloromethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Vinyl chloride	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Dichlorodifluoromethane	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Chloroethane	ND	0.211	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
sec-Butylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromodichloromethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1-Dichloroethene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
2-Butanone (MEK)	ND	0.264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Methylene chloride	ND	0.106	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Trichlorofluoromethane	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
P & M -Xylene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Naphthalene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
o-Xylene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Bromoform	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,4-Trimethylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
tert-Butylbenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,1-Trichloroethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1-Dichloroethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW



SGS Ref.# 1084993007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Client Sample ID 1417-090908-TB  
Matrix Solid/Soil (Wet Weight)

Printed Date/Time 10/01/2008 16:23  
Collected Date/Time 09/09/2008 9:45  
Received Date/Time 09/16/2008 9:40  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
2-Chlorotoluene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Trichloroethene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
trans-1,2-Dichloroethene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dichlorobenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
2,2-Dichloropropane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Hexachlorobutadiene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
Isopropylbenzene (Cumene)	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
2-Hexanone	ND	0.264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2-Dichloropropane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1-Dichloropropene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,1,2-Trichloroethane	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,3-Dichlorobenzene	ND	0.0264	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
1,2,3-Trichlorobenzene	ND	0.0529	mg/Kg	SW8260B	A		09/09/08	09/19/08	KPW
<b><u>Surrogates</u></b>									
1,2-Dichloroethane-D4 <surr>	92.6		%	SW8260B	A	80-137	09/09/08	09/19/08	KPW
1,2-Dichloroethane-D4 <surr>	91		%	SW8260B	A	80-137	09/09/08	09/22/08	KPW
Toluene-d8 <surr>	110		%	SW8260B	A	80-122	09/09/08	09/19/08	KPW
Toluene-d8 <surr>	112		%	SW8260B	A	80-122	09/09/08	09/22/08	KPW
4-Bromofluorobenzene <surr>	95.8		%	SW8260B	A	42-147	09/09/08	09/19/08	KPW
4-Bromofluorobenzene <surr>	96.6		%	SW8260B	A	42-147	09/09/08	09/22/08	KPW



SGS Ref.# 857830 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18726  
Method SW5035A  
Date 09/18/2008

QC results affect the following production samples:

1084993001

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>					
n-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
Carbon disulfide	ND	0.100	0.0310	mg/Kg	09/18/08
1,4-Dichlorobenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
1,2-Dichloroethane	ND	0.0250	0.00780	mg/Kg	09/18/08
Chlorobenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
4-Methyl-2-pentanone (MIBK)	ND	0.250	0.0780	mg/Kg	09/18/08
cis-1,2-Dichloroethene	ND	0.0250	0.00780	mg/Kg	09/18/08
4-Isopropyltoluene	ND	0.0250	0.00780	mg/Kg	09/18/08
Methyl-t-butyl ether	ND	0.0400	0.0120	mg/Kg	09/18/08
cis-1,3-Dichloropropene	ND	0.0250	0.00780	mg/Kg	09/18/08
n-Propylbenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
Styrene	ND	0.0250	0.00780	mg/Kg	09/18/08
Dibromomethane	ND	0.0250	0.00780	mg/Kg	09/18/08
trans-1,3-Dichloropropene	ND	0.0250	0.00780	mg/Kg	09/18/08
1,2,4-Trichlorobenzene	ND	0.0500	0.0150	mg/Kg	09/18/08
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0150	mg/Kg	09/18/08
1,2-Dibromo-3-chloropropane	ND	0.100	0.0310	mg/Kg	09/18/08
Tetrachloroethene	ND	0.0250	0.00780	mg/Kg	09/18/08
Dibromochloromethane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,3-Dichloropropane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,2-Dibromoethane	ND	0.0250	0.00780	mg/Kg	09/18/08
Carbon tetrachloride	ND	0.0250	0.00780	mg/Kg	09/18/08
1,1,1,2-Tetrachloroethane	ND	0.0250	0.00780	mg/Kg	09/18/08
Chloroform	ND	0.0250	0.00780	mg/Kg	09/18/08
Bromobenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
Chloromethane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,2,3-Trichloropropane	ND	0.0500	0.0150	mg/Kg	09/18/08
Bromomethane	ND	0.200	0.0620	mg/Kg	09/18/08
Bromochloromethane	ND	0.0250	0.00780	mg/Kg	09/18/08
Vinyl chloride	ND	0.0250	0.0120	mg/Kg	09/18/08
Dichlorodifluoromethane	ND	0.0500	0.0150	mg/Kg	09/18/08
Chloroethane	ND	0.200	0.0620	mg/Kg	09/18/08
sec-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
Bromodichloromethane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,1-Dichloroethene	ND	0.0250	0.00780	mg/Kg	09/18/08
2-Butanone (MEK)	ND	0.250	0.0780	mg/Kg	09/18/08



SGS Ref.# 857830 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18726  
Method SW5035A  
Date 09/18/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Methylene chloride	ND	0.100	0.0310	mg/Kg	09/18/08
Trichlorofluoromethane	ND	0.0500	0.0150	mg/Kg	09/18/08
Bromoform	ND	0.0250	0.00780	mg/Kg	09/18/08
tert-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
1,1,1-Trichloroethane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,1-Dichloroethane	ND	0.0250	0.00780	mg/Kg	09/18/08
2-Chlorotoluene	ND	0.0250	0.00780	mg/Kg	09/18/08
Trichloroethene	ND	0.0250	0.00780	mg/Kg	09/18/08
trans-1,2-Dichloroethene	ND	0.0250	0.00780	mg/Kg	09/18/08
1,2-Dichlorobenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
2,2-Dichloropropane	ND	0.0250	0.00780	mg/Kg	09/18/08
Hexachlorobutadiene	ND	0.0500	0.0150	mg/Kg	09/18/08
Isopropylbenzene (Cumene)	ND	0.0250	0.00780	mg/Kg	09/18/08
2-Hexanone	ND	0.250	0.0780	mg/Kg	09/18/08
1,2-Dichloropropane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,1-Dichloropropene	ND	0.0250	0.00780	mg/Kg	09/18/08
1,1,2-Trichloroethane	ND	0.0250	0.00780	mg/Kg	09/18/08
1,3-Dichlorobenzene	ND	0.0250	0.00780	mg/Kg	09/18/08
1,2,3-Trichlorobenzene	ND	0.0500	0.0150	mg/Kg	09/18/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	86.6	80-137		%	09/18/08
Toluene-d8 <surr>	105	80-122		%	09/18/08
4-Bromofluorobenzene <surr>	101	42-147		%	09/18/08

Batch VMS10111  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA





SGS Ref.# 857966 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18729  
Method SW5035A  
Date 09/19/2008

QC results affect the following production samples:

1084993005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Gasoline Range Organics	ND	2.50	0.500	mg/Kg	09/19/08
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**Surrogates**

4-Bromofluorobenzene <surr>	99.5	50-150		%	09/19/08
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Batch VFC9164  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA

Benzene	0.00653J	0.0125	0.00400	mg/Kg	09/19/08
Toluene	ND	0.0500	0.0150	mg/Kg	09/19/08
Ethylbenzene	ND	0.0500	0.0150	mg/Kg	09/19/08
o-Xylene	ND	0.0500	0.0150	mg/Kg	09/19/08
P & M -Xylene	ND	0.0500	0.0150	mg/Kg	09/19/08

**Surrogates**

1,4-Difluorobenzene <surr>	93.2	80-120		%	09/19/08
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Batch VFC9164  
Method SW8021B  
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 857971 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18730  
Method SW5035A  
Date 09/19/2008

QC results affect the following production samples:

1084993001, 1084993002, 1084993003, 1084993004, 1084993007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Gasoline Range Organics	ND	2.50	0.500	mg/Kg	09/19/08
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**Surrogates**

4-Bromofluorobenzene <surr>	99.3	50-150		%	09/19/08
1,4-Difluorobenzene <surr>	92.5	80-120		%	09/19/08

Batch VFC9164  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 857993 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch  
Method  
Date

QC results affect the following production samples:

1084993001, 1084993002, 1084993003, 1084993004, 1084993005, 1084993006

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Solids**

Total Solids	100			%	09/19/08
Batch	SPT7814				
Method	SM20 2540G				
Instrument					



SGS Ref.# 858277 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method SW5035A  
Date 09/19/2008

QC results affect the following production samples:

1084993001, 1084993002, 1084993003, 1084993004, 1084993007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 858277 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method SW5035A  
Date 09/19/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	ND	0.0150	0.00500	mg/Kg	09/19/08
Toluene	ND	0.0500	0.0150	mg/Kg	09/19/08
Ethylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
n-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,4-Dichlorobenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,2-Dichloroethane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,3,5-Trimethylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
4-Chlorotoluene	ND	0.0250	0.00780	mg/Kg	09/19/08
Chlorobenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
4-Methyl-2-pentanone (MIBK)	ND	0.250	0.0780	mg/Kg	09/19/08
cis-1,2-Dichloroethene	ND	0.0250	0.00780	mg/Kg	09/19/08
4-Isopropyltoluene	ND	0.0250	0.00780	mg/Kg	09/19/08
Methyl-t-butyl ether	ND	0.0400	0.0120	mg/Kg	09/19/08
cis-1,3-Dichloropropene	ND	0.0250	0.00780	mg/Kg	09/19/08
n-Propylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
Styrene	ND	0.0250	0.00780	mg/Kg	09/19/08
Dibromomethane	ND	0.0250	0.00780	mg/Kg	09/19/08
trans-1,3-Dichloropropene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,2,4-Trichlorobenzene	ND	0.0500	0.0150	mg/Kg	09/19/08
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0150	mg/Kg	09/19/08
1,2-Dibromo-3-chloropropane	ND	0.100	0.0310	mg/Kg	09/19/08
Tetrachloroethene	ND	0.0250	0.00780	mg/Kg	09/19/08
Dibromochloromethane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,3-Dichloropropane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,2-Dibromoethane	ND	0.0250	0.00780	mg/Kg	09/19/08
Carbon tetrachloride	ND	0.0250	0.00780	mg/Kg	09/19/08
1,1,1,2-Tetrachloroethane	ND	0.0250	0.00780	mg/Kg	09/19/08
Chloroform	ND	0.0250	0.00780	mg/Kg	09/19/08
Bromobenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
Chloromethane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,2,3-Trichloropropane	ND	0.0500	0.0150	mg/Kg	09/19/08
Bromomethane	ND	0.200	0.0620	mg/Kg	09/19/08
Bromochloromethane	ND	0.0250	0.00780	mg/Kg	09/19/08
Vinyl chloride	ND	0.0250	0.0120	mg/Kg	09/19/08
Dichlorodifluoromethane	ND	0.0500	0.0150	mg/Kg	09/19/08
Chloroethane	ND	0.200	0.0620	mg/Kg	09/19/08
sec-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
Bromodichloromethane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,1-Dichloroethene	ND	0.0250	0.00780	mg/Kg	09/19/08



SGS Ref.# 858277 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method SW5035A  
Date 09/19/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

2-Butanone (MEK)	ND	0.250	0.0780	mg/Kg	09/19/08
Methylene chloride	ND	0.100	0.0310	mg/Kg	09/19/08
Trichlorofluoromethane	ND	0.0500	0.0150	mg/Kg	09/19/08
P & M -Xylene	ND	0.0500	0.0150	mg/Kg	09/19/08
Naphthalene	ND	0.0500	0.0150	mg/Kg	09/19/08
o-Xylene	ND	0.0500	0.0150	mg/Kg	09/19/08
Bromoform	ND	0.0250	0.00780	mg/Kg	09/19/08
Xylenes (total)	ND	0.100	0.0300	mg/Kg	09/19/08
1,2,4-Trimethylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
tert-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,1,1-Trichloroethane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,1-Dichloroethane	ND	0.0250	0.00780	mg/Kg	09/19/08
2-Chlorotoluene	ND	0.0250	0.00780	mg/Kg	09/19/08
Trichloroethene	ND	0.0250	0.00780	mg/Kg	09/19/08
trans-1,2-Dichloroethene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,2-Dichlorobenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
2,2-Dichloropropane	ND	0.0250	0.00780	mg/Kg	09/19/08
Hexachlorobutadiene	ND	0.0500	0.0150	mg/Kg	09/19/08
Isopropylbenzene (Cumene)	ND	0.0250	0.00780	mg/Kg	09/19/08
2-Hexanone	ND	0.250	0.0780	mg/Kg	09/19/08
1,2-Dichloropropane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,1-Dichloropropene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,1,2-Trichloroethane	ND	0.0250	0.00780	mg/Kg	09/19/08
1,3-Dichlorobenzene	ND	0.0250	0.00780	mg/Kg	09/19/08
1,2,3-Trichlorobenzene	ND	0.0500	0.0150	mg/Kg	09/19/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	84.7	80-137		%	09/19/08
Toluene-d8 <surr>	108	80-122		%	09/19/08
4-Bromofluorobenzene <surr>	99.1	42-147		%	09/19/08

Batch VMS10117  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 858592 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18739  
Method SW5035A  
Date 09/22/2008

QC results affect the following production samples:

1084993002, 1084993003, 1084993004, 1084993007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Toluene	ND	0.0500	0.0150	mg/Kg	09/22/08
Ethylbenzene	ND	0.0250	0.00780	mg/Kg	09/22/08
n-Butylbenzene	ND	0.0250	0.00780	mg/Kg	09/22/08
Carbon disulfide	ND	0.100	0.0310	mg/Kg	09/22/08
1,3,5-Trimethylbenzene	ND	0.0250	0.00780	mg/Kg	09/22/08
4-Isopropyltoluene	ND	0.0250	0.00780	mg/Kg	09/22/08
n-Propylbenzene	ND	0.0250	0.00780	mg/Kg	09/22/08
P & M -Xylene	ND	0.0500	0.0150	mg/Kg	09/22/08
Naphthalene	0.0210J	0.0500	0.0150	mg/Kg	09/22/08
o-Xylene	ND	0.0500	0.0150	mg/Kg	09/22/08
1,2,4-Trimethylbenzene	ND	0.0250	0.00780	mg/Kg	09/22/08
Isopropylbenzene (Cumene)	ND	0.0250	0.00780	mg/Kg	09/22/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	84	80-137		%	09/22/08
Toluene-d8 <surr>	112	80-122		%	09/22/08
4-Bromofluorobenzene <surr>	102	42-147		%	09/22/08

Batch VMS10119  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 858895 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18746  
Method SW5035A  
Date 09/20/2008

QC results affect the following production samples:

1084993006

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Gasoline Range Organics ND 2.50 0.500 mg/Kg 09/20/08

**Surrogates**

4-Bromofluorobenzene <surr> 97 50-150 % 09/20/08

Batch VFC9169  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA

Benzene 0.00700J 0.0125 0.00400 mg/Kg 09/20/08

Toluene ND 0.0500 0.0150 mg/Kg 09/20/08

Ethylbenzene ND 0.0500 0.0150 mg/Kg 09/20/08

o-Xylene ND 0.0500 0.0150 mg/Kg 09/20/08

P & M -Xylene ND 0.0500 0.0150 mg/Kg 09/20/08

**Surrogates**

1,4-Difluorobenzene <surr> 92.5 80-120 % 09/20/08

Batch VFC9169  
Method SW8021B  
Instrument HP 5890 Series II PID+FID VCA





SGS Ref.# 859151 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch XXX20076  
Method SW3550C  
Date 09/24/2008

QC results affect the following production samples:

1084993001, 1084993002, 1084993003, 1084993004, 1084993005, 1084993006

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b>Semivolatile Organic Fuels Department</b>					
Diesel Range Organics	2.78 J	20.0	2.00	mg/Kg	09/25/08
<b>Surrogates</b>					
5a Androstane <surr>	80.1	60-120		%	09/25/08
Batch	XFC8219				
Method	AK102				
Instrument	HP 5890 Series II FID SV D R				



SGS Ref.# 857994 Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Original 1084883029  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch  
Method  
Date

QC results affect the following production samples:  
1084993001, 1084993002, 1084993003, 1084993004, 1084993005, 1084993006

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

Total Solids	94.9	95.2	%	0	(< 15 )	09/19/2008
Batch	SPT7814					
Method	SM20 2540G					
Instrument						



SGS Ref.# 857831 Lab Control Sample

Printed Date/Time 10/01/2008 16:23

Client Name Shannon & Wilson-Fairbanks

Prep Batch VXX18726

Project Name/# 31-1-11417-002 Mark Air

Method SW5035A

Matrix Soil/Solid (dry weight)

Date 09/18/2008

QC results affect the following production samples:

1084993001

Parameter	QC Results	Pet Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
n-Butylbenzene	LCS 0.753	100	( 80-123 )			0.750 mg/Kg	09/18/2008
Carbon disulfide	LCS 1.23	109	( 61-135 )			1.13 mg/Kg	09/18/2008
1,4-Dichlorobenzene	LCS 0.717	96	( 80-120 )			0.750 mg/Kg	09/18/2008
1,2-Dichloroethane	LCS 0.638	85	( 80-133 )			0.750 mg/Kg	09/18/2008
Chlorobenzene	LCS 0.741	99	( 80-122 )			0.750 mg/Kg	09/18/2008
4-Methyl-2-pentanone (MIBK)	LCS 2.33	104	( 76-120 )			2.25 mg/Kg	09/18/2008
cis-1,2-Dichloroethene	LCS 0.784	105	( 80-124 )			0.750 mg/Kg	09/18/2008
4-Isopropyltoluene	LCS 0.761	101	( 80-120 )			0.750 mg/Kg	09/18/2008
Methyl-t-butyl ether	LCS 1.13	101	( 78-123 )			1.13 mg/Kg	09/18/2008
cis-1,3-Dichloropropene	LCS 0.823	110	( 80-120 )			0.750 mg/Kg	09/18/2008
n-Propylbenzene	LCS 0.741	99	( 80-122 )			0.750 mg/Kg	09/18/2008
Styrene	LCS 0.824	110	( 80-120 )			0.750 mg/Kg	09/18/2008
Dibromomethane	LCS 0.707	94	( 79-126 )			0.750 mg/Kg	09/18/2008
trans-1,3-Dichloropropene	LCS 0.756	101	( 80-120 )			0.750 mg/Kg	09/18/2008
1,2,4-Trichlorobenzene	LCS 0.818	109	( 80-122 )			0.750 mg/Kg	09/18/2008
1,1,2,2-Tetrachloroethane	LCS 0.731	98	( 79-120 )			0.750 mg/Kg	09/18/2008
1,2-Dibromo-3-chloropropane	LCS 0.706	94	( 64-128 )			0.750 mg/Kg	09/18/2008
Tetrachloroethene	LCS 0.768	102	( 78-124 )			0.750 mg/Kg	09/18/2008
Dibromochloromethane	LCS 0.711	95	( 80-122 )			0.750 mg/Kg	09/18/2008
1,3-Dichloropropane	LCS 0.712	95	( 80-120 )			0.750 mg/Kg	09/18/2008



SGS Ref.# 857831 Lab Control Sample

Printed Date/Time 10/01/2008 16:23

Client Name Shannon & Wilson-Fairbanks

Prep Batch VXX18726

Project Name/# 31-1-11417-002 Mark Air

Method SW5035A

Matrix Soil/Solid (dry weight)

Date 09/18/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,2-Dibromoethane	LCS	0.748	100	( 80-121 )		0.750 mg/Kg	09/18/2008
Carbon tetrachloride	LCS	0.691	92	( 73-133 )		0.750 mg/Kg	09/18/2008
1,1,1,2-Tetrachloroethane	LCS	0.704	94	( 78-125 )		0.750 mg/Kg	09/18/2008
Chloroform	LCS	0.657	88	( 80-124 )		0.750 mg/Kg	09/18/2008
Bromobenzene	LCS	0.729	97	( 80-120 )		0.750 mg/Kg	09/18/2008
Chloromethane	LCS	0.914	122	( 68-129 )		0.750 mg/Kg	09/18/2008
1,2,3-Trichloropropane	LCS	0.716	96	( 75-121 )		0.750 mg/Kg	09/18/2008
Bromomethane	LCS	0.752	100	( 52-140 )		0.750 mg/Kg	09/18/2008
Bromochloromethane	LCS	0.721	96	( 78-125 )		0.750 mg/Kg	09/18/2008
Vinyl chloride	LCS	0.911	122	( 78-125 )		0.750 mg/Kg	09/18/2008
Dichlorodifluoromethane	LCS	1.10	146 *	( 67-135 )		0.750 mg/Kg	09/18/2008
Chloroethane	LCS	0.889	119	( 53-141 )		0.750 mg/Kg	09/18/2008
sec-Butylbenzene	LCS	0.819	109	( 80-120 )		0.750 mg/Kg	09/18/2008
Bromodichloromethane	LCS	0.672	90	( 80-126 )		0.750 mg/Kg	09/18/2008
1,1-Dichloroethene	LCS	0.814	109	( 73-126 )		0.750 mg/Kg	09/18/2008
2-Butanone (MEK)	LCS	2.01	89	( 70-124 )		2.25 mg/Kg	09/18/2008
Methylene chloride	LCS	0.782	104	( 76-124 )		0.750 mg/Kg	09/18/2008
Trichlorofluoromethane	LCS	0.769	102	( 58-172 )		0.750 mg/Kg	09/18/2008
Bromoform	LCS	0.747	100	( 74-129 )		0.750 mg/Kg	09/18/2008
tert-Butylbenzene	LCS	0.764	102	( 80-120 )		0.750 mg/Kg	09/18/2008



SGS Ref.# 857831 Lab Control Sample  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18726  
Method SW5035A  
Date 09/18/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
1,1,1-Trichloroethane	LCS 0.675	90	( 77-130 )			0.750 mg/Kg	09/18/2008
1,1-Dichloroethane	LCS 0.682	91	( 80-120 )			0.750 mg/Kg	09/18/2008
2-Chlorotoluene	LCS 0.731	98	( 80-123 )			0.750 mg/Kg	09/18/2008
Trichloroethene	LCS 0.719	96	( 80-122 )			0.750 mg/Kg	09/18/2008
trans-1,2-Dichloroethene	LCS 0.724	97	( 80-126 )			0.750 mg/Kg	09/18/2008
1,2-Dichlorobenzene	LCS 0.698	93	( 80-120 )			0.750 mg/Kg	09/18/2008
2,2-Dichloropropane	LCS 0.677	90	( 80-134 )			0.750 mg/Kg	09/18/2008
Hexachlorobutadiene	LCS 0.752	100	( 78-133 )			0.750 mg/Kg	09/18/2008
Isopropylbenzene (Cumene)	LCS 0.807	108	( 80-120 )			0.750 mg/Kg	09/18/2008
2-Hexanone	LCS 1.93	86	( 63-125 )			2.25 mg/Kg	09/18/2008
1,2-Dichloropropane	LCS 0.731	98	( 80-120 )			0.750 mg/Kg	09/18/2008
1,1-Dichloropropene	LCS 0.795	106	( 80-124 )			0.750 mg/Kg	09/18/2008
1,1,2-Trichloroethane	LCS 0.731	98	( 82-120 )			0.750 mg/Kg	09/18/2008
1,3-Dichlorobenzene	LCS 0.683	91	( 80-120 )			0.750 mg/Kg	09/18/2008
1,2,3-Trichlorobenzene	LCS 0.817	109	( 77-126 )			0.750 mg/Kg	09/18/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS	93	( 80-137 )				09/18/2008
Toluene-d8 <surr>	LCS	108	( 80-122 )				09/18/2008
4-Bromofluorobenzene <surr>	LCS	95	( 42-147 )				09/18/2008

Batch VMS10111  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 857831 Lab Control Sample  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18726  
Method SW5035A  
Date 09/18/2008



**SGS Ref.#** 857967 Lab Control Sample  
 857968 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-002 Mark Air  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/01/2008 16:23  
**Prep Batch** VXX18729  
**Method** SW5035A  
**Date** 09/19/2008

QC results affect the following production samples:  
 1084993005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	1.24	99	( 80-125 )		1.25 mg/Kg	09/19/2008
	LCSD	1.22	98		1	(< 20 )	1.25 mg/Kg 09/19/2008
Toluene	LCS	1.36	109	( 85-120 )		1.25 mg/Kg	09/19/2008
	LCSD	1.35	108		0	(< 20 )	1.25 mg/Kg 09/19/2008
Ethylbenzene	LCS	1.42	114	( 85-125 )		1.25 mg/Kg	09/19/2008
	LCSD	1.41	113		0	(< 20 )	1.25 mg/Kg 09/19/2008
o-Xylene	LCS	1.34	107	( 85-125 )		1.25 mg/Kg	09/19/2008
	LCSD	1.34	107		1	(< 20 )	1.25 mg/Kg 09/19/2008
P & M -Xylene	LCS	2.86	114	( 85-125 )		2.50 mg/Kg	09/19/2008
	LCSD	2.85	114		0	(< 20 )	2.50 mg/Kg 09/19/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		99	( 80-120 )			09/19/2008
	LCSD		98		0		09/19/2008

**Batch** VFC9164  
**Method** SW8021B  
**Instrument** HP 5890 Series II PID+FID VCA



SGS Ref.# 857969 Lab Control Sample  
857970 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18729  
Method SW5035A  
Date 09/19/2008

QC results affect the following production samples:

1084993005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	11.1	99	( 60-120 )		11.3 mg/Kg	09/19/2008
	LCSD	10.8	96		3 (< 20)	11.3 mg/Kg	09/19/2008
<b>Surrogates</b>							
4-Bromofluorobenzene <surr>	LCS		100	( 50-150 )			09/19/2008
	LCSD		98		2		09/19/2008

Batch VFC9164  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA





SGS Ref.# 857972 Lab Control Sample  
857973 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18730  
Method SW5035A  
Date 09/19/2008

QC results affect the following production samples:  
1084993001, 1084993002, 1084993003, 1084993004, 1084993007

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	11.0	98	( 60-120 )		11.3 mg/Kg	09/19/2008
	LCSD	10.9	97		1 (< 20)	11.3 mg/Kg	09/19/2008
<b>Surrogates</b>							
4-Bromofluorobenzene <surr>	LCS		104	( 50-150 )			09/19/2008
	LCSD		105		1		09/19/2008

Batch VFC9164  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 858278 Lab Control Sample

Printed Date/Time 10/01/2008 16:23

Client Name Shannon & Wilson-Fairbanks

Prep Batch VXX18734

Project Name/# 31-1-11417-002 Mark Air

Method SW5035A

Matrix Soil/Solid (dry weight)

Date 09/19/2008

QC results affect the following production samples:

1084993001, 1084993002, 1084993003, 1084993004, 1084993007

Parameter	QC Results	Pet Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 858278 Lab Control Sample  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method SW5035A  
Date 09/19/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
Benzene	LCS	0.696	93	( 80-125 )		0.750 mg/Kg	09/19/2008
Toluene	LCS	0.741	99	( 80-120 )		0.750 mg/Kg	09/19/2008
Ethylbenzene	LCS	0.757	101	( 80-120 )		0.750 mg/Kg	09/19/2008
n-Butylbenzene	LCS	0.765	102	( 80-123 )		0.750 mg/Kg	09/19/2008
1,4-Dichlorobenzene	LCS	0.730	97	( 80-120 )		0.750 mg/Kg	09/19/2008
1,2-Dichloroethane	LCS	0.618	82	( 80-133 )		0.750 mg/Kg	09/19/2008
1,3,5-Trimethylbenzene	LCS	0.746	99	( 80-120 )		0.750 mg/Kg	09/19/2008
4-Chlorotoluene	LCS	0.710	95	( 80-120 )		0.750 mg/Kg	09/19/2008
Chlorobenzene	LCS	0.719	96	( 80-122 )		0.750 mg/Kg	09/19/2008
4-Methyl-2-pentanone (MIBK)	LCS	2.26	100	( 76-120 )		2.25 mg/Kg	09/19/2008
cis-1,2-Dichloroethene	LCS	0.761	102	( 80-124 )		0.750 mg/Kg	09/19/2008
4-Isopropyltoluene	LCS	0.770	103	( 80-120 )		0.750 mg/Kg	09/19/2008
Methyl-t-butyl ether	LCS	1.07	95	( 78-123 )		1.13 mg/Kg	09/19/2008
cis-1,3-Dichloropropene	LCS	0.812	108	( 80-120 )		0.750 mg/Kg	09/19/2008
n-Propylbenzene	LCS	0.753	100	( 80-122 )		0.750 mg/Kg	09/19/2008
Styrene	LCS	0.815	109	( 80-120 )		0.750 mg/Kg	09/19/2008
Dibromomethane	LCS	0.669	89	( 79-126 )		0.750 mg/Kg	09/19/2008
trans-1,3-Dichloropropene	LCS	0.743	99	( 80-120 )		0.750 mg/Kg	09/19/2008
1,2,4-Trichlorobenzene	LCS	0.782	104	( 80-122 )		0.750 mg/Kg	09/19/2008
1,1,2,2-Tetrachloroethane	LCS	0.794	106	( 79-120 )		0.750 mg/Kg	09/19/2008
1,2-Dibromo-3-chloropropane	LCS	0.725	97	( 64-128 )		0.750 mg/Kg	09/19/2008



SGS Ref.# 858278 Lab Control Sample  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method SW5035A  
Date 09/19/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
Tetrachloroethene	LCS 0.765	102	( 78-124 )			0.750 mg/Kg	09/19/2008
Dibromochloromethane	LCS 0.691	92	( 80-122 )			0.750 mg/Kg	09/19/2008
1,3-Dichloropropane	LCS 0.696	93	( 80-120 )			0.750 mg/Kg	09/19/2008
1,2-Dibromoethane	LCS 0.736	98	( 80-121 )			0.750 mg/Kg	09/19/2008
Carbon tetrachloride	LCS 0.654	87	( 73-133 )			0.750 mg/Kg	09/19/2008
1,1,1,2-Tetrachloroethane	LCS 0.706	94	( 78-125 )			0.750 mg/Kg	09/19/2008
Chloroform	LCS 0.635	85	( 80-124 )			0.750 mg/Kg	09/19/2008
Bromobenzene	LCS 0.746	99	( 80-120 )			0.750 mg/Kg	09/19/2008
Chloromethane	LCS 0.904	121	( 68-129 )			0.750 mg/Kg	09/19/2008
1,2,3-Trichloropropane	LCS 0.693	92	( 75-121 )			0.750 mg/Kg	09/19/2008
Bromomethane	LCS 0.713	95	( 52-140 )			0.750 mg/Kg	09/19/2008
Bromochloromethane	LCS 0.713	95	( 78-125 )			0.750 mg/Kg	09/19/2008
Vinyl chloride	LCS 0.931	124	( 78-125 )			0.750 mg/Kg	09/19/2008
Dichlorodifluoromethane	LCS 1.06	142 *	( 67-135 )			0.750 mg/Kg	09/19/2008
Chloroethane	LCS 0.849	113	( 53-141 )			0.750 mg/Kg	09/19/2008
sec-Butylbenzene	LCS 0.833	111	( 80-120 )			0.750 mg/Kg	09/19/2008
Bromodichloromethane	LCS 0.644	86	( 80-126 )			0.750 mg/Kg	09/19/2008
1,1-Dichloroethene	LCS 0.667	89	( 73-126 )			0.750 mg/Kg	09/19/2008
2-Butanone (MEK)	LCS 2.03	90	( 70-124 )			2.25 mg/Kg	09/19/2008
Methylene chloride	LCS 0.763	102	( 76-124 )			0.750 mg/Kg	09/19/2008



SGS Ref.# 858278 Lab Control Sample  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method SW5035A  
Date 09/19/2008

Parameter	QC Results	Pet Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
Trichlorofluoromethane	LCS 0.801	107	( 58-172 )			0.750 mg/Kg	09/19/2008
P & M -Xylene	LCS 1.51	101	( 80-120 )			1.50 mg/Kg	09/19/2008
Naphthalene	LCS 0.795	106	( 71-121 )			0.750 mg/Kg	09/19/2008
o-Xylene	LCS 0.785	105	( 80-120 )			0.750 mg/Kg	09/19/2008
Bromoform	LCS 0.731	98	( 74-129 )			0.750 mg/Kg	09/19/2008
Xylenes (total)	LCS 2.29	102	( 80-120 )			2.25 mg/Kg	09/19/2008
1,2,4-Trimethylbenzene	LCS 0.747	100	( 80-120 )			0.750 mg/Kg	09/19/2008
tert-Butylbenzene	LCS 0.768	102	( 80-120 )			0.750 mg/Kg	09/19/2008
1,1,1-Trichloroethane	LCS 0.665	89	( 77-130 )			0.750 mg/Kg	09/19/2008
1,1-Dichloroethane	LCS 0.662	88	( 80-120 )			0.750 mg/Kg	09/19/2008
2-Chlorotoluene	LCS 0.737	98	( 80-123 )			0.750 mg/Kg	09/19/2008
Trichloroethene	LCS 0.711	95	( 80-122 )			0.750 mg/Kg	09/19/2008
trans-1,2-Dichloroethene	LCS 0.701	93	( 80-126 )			0.750 mg/Kg	09/19/2008
1,2-Dichlorobenzene	LCS 0.707	94	( 80-120 )			0.750 mg/Kg	09/19/2008
2,2-Dichloropropane	LCS 0.660	88	( 80-134 )			0.750 mg/Kg	09/19/2008
Hexachlorobutadiene	LCS 0.730	97	( 78-133 )			0.750 mg/Kg	09/19/2008
Isopropylbenzene (Cumene)	LCS 0.797	106	( 80-120 )			0.750 mg/Kg	09/19/2008
2-Hexanone	LCS 1.83	81	( 63-125 )			2.25 mg/Kg	09/19/2008
1,2-Dichloropropane	LCS 0.723	96	( 80-120 )			0.750 mg/Kg	09/19/2008
1,1-Dichloropropene	LCS 0.775	103	( 80-124 )			0.750 mg/Kg	09/19/2008
1,1,2-Trichloroethane	LCS 0.712	95	( 82-120 )			0.750 mg/Kg	09/19/2008



SGS Ref.# 858278 Lab Control Sample

Printed Date/Time 10/01/2008 16:23

Client Name Shannon & Wilson-Fairbanks

Prep Batch VXX18734

Project Name/# 31-1-11417-002 Mark Air

Method SW5035A

Matrix Soil/Solid (dry weight)

Date 09/19/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,3-Dichlorobenzene	LCS	0.702	94	( 80-120 )		0.750 mg/Kg	09/19/2008
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1,2,3-Trichlorobenzene	LCS	0.792	106	( 77-126 )		0.750 mg/Kg	09/19/2008
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**Surrogates**

1,2-Dichloroethane-D4 <surr>	LCS		91	( 80-137 )			09/19/2008
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Toluene-d8 <surr>	LCS		108	( 80-122 )			09/19/2008
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4-Bromofluorobenzene <surr>	LCS		100	( 42-147 )			09/19/2008
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Batch VMS10117  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 858593 Lab Control Sample

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18739  
Method SW5035A  
Date 09/22/2008

Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:  
1084993002, 1084993003, 1084993004, 1084993007

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
Toluene	LCS 0.756	101	( 80-120 )			0.750 mg/Kg	09/22/2008
Ethylbenzene	LCS 0.779	104	( 80-120 )			0.750 mg/Kg	09/22/2008
n-Butylbenzene	LCS 0.760	101	( 80-123 )			0.750 mg/Kg	09/22/2008
Carbon disulfide	LCS 1.21	107	( 61-135 )			1.13 mg/Kg	09/22/2008
1,3,5-Trimethylbenzene	LCS 0.741	99	( 80-120 )			0.750 mg/Kg	09/22/2008
4-Isopropyltoluene	LCS 0.771	103	( 80-120 )			0.750 mg/Kg	09/22/2008
n-Propylbenzene	LCS 0.756	101	( 80-122 )			0.750 mg/Kg	09/22/2008
P & M -Xylene	LCS 1.53	102	( 80-120 )			1.50 mg/Kg	09/22/2008
Naphthalene	LCS 0.773	103	( 71-121 )			0.750 mg/Kg	09/22/2008
o-Xylene	LCS 0.811	108	( 80-120 )			0.750 mg/Kg	09/22/2008
1,2,4-Trimethylbenzene	LCS 0.747	100	( 80-120 )			0.750 mg/Kg	09/22/2008
Isopropylbenzene (Cumene)	LCS 0.810	108	( 80-120 )			0.750 mg/Kg	09/22/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS	89	( 80-137 )				09/22/2008
Toluene-d8 <surr>	LCS	110	( 80-122 )				09/22/2008
4-Bromofluorobenzene <surr>	LCS	100	( 42-147 )				09/22/2008

Batch VMS10119  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 858896 Lab Control Sample  
 858897 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
 Prep Batch VXX18746  
 Method SW5035A  
 Date 09/20/2008

QC results affect the following production samples:

1084993006

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Fuels Department</b>							
Benzene	LCS	1.24	100	( 80-125 )		1.25 mg/Kg	09/20/2008
	LCSD	1.23	98		2	(< 20 )	1.25 mg/Kg 09/20/2008
Toluene	LCS	1.37	110	( 85-120 )		1.25 mg/Kg	09/20/2008
	LCSD	1.36	109		1	(< 20 )	1.25 mg/Kg 09/20/2008
Ethylbenzene	LCS	1.43	114	( 85-125 )		1.25 mg/Kg	09/20/2008
	LCSD	1.42	114		1	(< 20 )	1.25 mg/Kg 09/20/2008
o-Xylene	LCS	1.35	108	( 85-125 )		1.25 mg/Kg	09/20/2008
	LCSD	1.35	108		1	(< 20 )	1.25 mg/Kg 09/20/2008
P & M -Xylene	LCS	2.88	115	( 85-125 )		2.50 mg/Kg	09/20/2008
	LCSD	2.87	115		0	(< 20 )	2.50 mg/Kg 09/20/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		98	( 80-120 )			09/20/2008
	LCSD		98		0		09/20/2008

Batch VFC9169  
 Method SW8021B  
 Instrument HP 5890 Series II PID+FID VCA





SGS Ref.# 858898 Lab Control Sample  
858899 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18746  
Method SW5035A  
Date 09/20/2008

QC results affect the following production samples:  
1084993006

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	10.7	96	( 60-120 )		11.3 mg/Kg	09/20/2008
	LCSD	11.1	99		3	(< 20 )	11.3 mg/Kg 09/20/2008
<b>Surrogates</b>							
4-Bromofluorobenzene <surrogate>	LCS		98	( 50-150 )			09/20/2008
	LCSD		100		2		09/20/2008

Batch VFC9169  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 859152 Lab Control Sample  
859153 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/01/2008 16:23  
Prep Batch XXX20076  
Method SW3550C  
Date 09/24/2008

QC results affect the following production samples:

1084993001, 1084993002, 1084993003, 1084993004, 1084993005, 1084993006

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

Diesel Range Organics	LCS 136	82	( 75-125 )			167 mg/Kg	09/25/2008
	LCSD 137	82		1	(< 20 )	167 mg/Kg	09/25/2008

**Surrogates**

5a Androstane <surr>	LCS	83	( 60-120 )				09/25/2008
	LCSD	81		2			09/25/2008

Batch XFC8219  
Method AK102  
Instrument HP 5890 Series II FID SV D R



SGS Ref.# 857833 Matrix Spike  
857834 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18726  
Method Vol. Extraction SW8260 Field I  
Date 09/18/2008

Original 857832  
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:  
1084993001

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
n-Butylbenzene	MS	ND	0.714	101	(80-123)			0.706 mg/Kg	09/18/2008
	MSD		0.719	102		1	(< 20)	0.706 mg/Kg	09/18/2008
Carbon disulfide	MS	ND	1.17	111	(61-135)			1.06 mg/Kg	09/18/2008
	MSD		1.18	111		1	(< 20)	1.06 mg/Kg	09/18/2008
1,4-Dichlorobenzene	MS	ND	0.678	96	(80-120)			0.706 mg/Kg	09/18/2008
	MSD		0.674	95		1	(< 20)	0.706 mg/Kg	09/18/2008
1,2-Dichloroethane	MS	ND	0.607	86	(80-133)			0.706 mg/Kg	09/18/2008
	MSD		0.614	87		1	(< 20)	0.706 mg/Kg	09/18/2008
Chlorobenzene	MS	ND	0.692	98	(80-122)			0.706 mg/Kg	09/18/2008
	MSD		0.687	97		1	(< 20)	0.706 mg/Kg	09/18/2008
4-Methyl-2-pentanone (MIBK)	MS	ND	2.24	106	(76-120)			2.12 mg/Kg	09/18/2008
	MSD		2.24	106		0	(< 20)	2.12 mg/Kg	09/18/2008
cis-1,2-Dichloroethene	MS	ND	0.722	102	(80-124)			0.706 mg/Kg	09/18/2008
	MSD		0.735	104		2	(< 20)	0.706 mg/Kg	09/18/2008
4-Isopropyltoluene	MS	ND	0.717	102	(80-120)			0.706 mg/Kg	09/18/2008
	MSD		0.718	102		0	(< 20)	0.706 mg/Kg	09/18/2008
Methyl-t-butyl ether	MS	ND	1.07	101	(78-123)			1.06 mg/Kg	09/18/2008
	MSD		1.07	101		0	(< 20)	1.06 mg/Kg	09/18/2008
cis-1,3-Dichloropropene	MS	ND	0.778	110	(80-120)			0.706 mg/Kg	09/18/2008
	MSD		0.786	111		1	(< 20)	0.706 mg/Kg	09/18/2008
n-Propylbenzene	MS	ND	0.697	99	(80-122)			0.706 mg/Kg	09/18/2008
	MSD		0.697	99		0	(< 20)	0.706 mg/Kg	09/18/2008
Styrene	MS	ND	0.782	111	(80-120)			0.706 mg/Kg	09/18/2008
	MSD		0.776	110		1	(< 20)	0.706 mg/Kg	09/18/2008
Dibromomethane	MS	ND	0.670	95	(79-126)			0.706 mg/Kg	09/18/2008
	MSD		0.668	95		0	(< 20)	0.706 mg/Kg	09/18/2008
trans-1,3-Dichloropropene	MS	ND	0.723	102	(80-120)			0.706 mg/Kg	09/18/2008
	MSD		0.736	104		2	(< 20)	0.706 mg/Kg	09/18/2008
1,2,4-Trichlorobenzene	MS	ND	0.781	111	(80-122)			0.706 mg/Kg	09/18/2008
	MSD		0.769	109		2	(< 20)	0.706 mg/Kg	09/18/2008
1,1,2,2-Tetrachloroethane	MS	ND	0.703	100	(79-120)			0.706 mg/Kg	09/18/2008
	MSD		0.721	102		3	(< 20)	0.706 mg/Kg	09/18/2008
1,2-Dibromo-3-chloropropane	MS	ND	0.706	100	(64-128)			0.706 mg/Kg	09/18/2008
	MSD		0.730	103		3	(< 20)	0.706 mg/Kg	09/18/2008
Tetrachloroethene	MS	ND	0.736	104	(78-124)			0.706 mg/Kg	09/18/2008
	MSD		0.737	104		0	(< 20)	0.706 mg/Kg	09/18/2008
Dibromochloromethane	MS	ND	0.687	97	(80-122)			0.706 mg/Kg	09/18/2008



SGS Ref.# 857833 Matrix Spike  
 857834 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
 Prep Batch VXX18726  
 Method Vol. Extraction SW8260 Field I  
 Date 09/18/2008

Original 857832  
 Matrix Solid/Soil (Wet Weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
1,3-Dichloropropane	MSD		0.691	98		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.682	97	(80-120)			0.706 mg/Kg	09/18/2008
1,2-Dibromoethane	MSD		0.686	97		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.729	103	(80-121)			0.706 mg/Kg	09/18/2008
Carbon tetrachloride	MSD		0.722	102		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.647	92	(73-133)			0.706 mg/Kg	09/18/2008
1,1,1,2-Tetrachloroethane	MSD		0.649	92		0	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.673	95	(78-125)			0.706 mg/Kg	09/18/2008
Chloroform	MSD		0.687	97		2	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.613	87	(80-124)			0.706 mg/Kg	09/18/2008
Bromobenzene	MSD		0.607	86		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.678	96	(80-120)			0.706 mg/Kg	09/18/2008
Chloromethane	MSD		0.680	96		0	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.869	123	(68-129)			0.706 mg/Kg	09/18/2008
1,2,3-Trichloropropane	MSD		0.858	122		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.692	98	(75-121)			0.706 mg/Kg	09/18/2008
Bromomethane	MSD		0.660	94		5	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.730	103	(52-140)			0.706 mg/Kg	09/18/2008
Bromochloromethane	MSD		0.754	107		3	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.676	96	(78-125)			0.706 mg/Kg	09/18/2008
Vinyl chloride	MSD		0.683	97		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.900	127*	(78-125)			0.706 mg/Kg	09/18/2008
Dichlorodifluoromethane	MSD		0.901	128*		0	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		1.02	145*	(67-135)			0.706 mg/Kg	09/18/2008
Chloroethane	MSD		1.02	144*		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.613	87	(53-141)			0.706 mg/Kg	09/18/2008
sec-Butylbenzene	MSD		0.625	89		2	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.767	109	(80-120)			0.706 mg/Kg	09/18/2008
Bromodichloromethane	MSD		0.784	111		2	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.626	89	(80-126)			0.706 mg/Kg	09/18/2008
1,1-Dichloroethene	MSD		0.620	88		1	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.628	89	(73-126)			0.706 mg/Kg	09/18/2008
2-Butanone (MEK)	MSD		0.716	101		13	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		1.89	89	(70-124)			2.12 mg/Kg	09/18/2008
Methylene chloride	MSD		2.09	99		10	(< 20)	2.12 mg/Kg	09/18/2008
	MS ND		0.752	107	(76-124)			0.706 mg/Kg	09/18/2008
Trichlorofluoromethane	MSD		0.734	104		3	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.748	106	(58-172)			0.706 mg/Kg	09/18/2008
Bromoform	MSD		0.762	108		2	(< 20)	0.706 mg/Kg	09/18/2008
	MS ND		0.731	103	(74-129)			0.706 mg/Kg	09/18/2008



SGS Ref.# 857833 Matrix Spike Printed Date/Time 10/01/2008 16:23  
 857834 Matrix Spike Duplicate Prep Batch VXX18726  
 Method Vol. Extraction SW8260 Field I  
 Date 09/18/2008

Original 857832  
 Matrix Solid/Soil (Wet Weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
		MSD	0.732	104		0	(< 20)	0.706 mg/Kg	09/18/2008
tert-Butylbenzene		MS ND	0.716	101	(80-120)			0.706 mg/Kg	09/18/2008
		MSD	0.717	102		0	(< 20)	0.706 mg/Kg	09/18/2008
1,1,1-Trichloroethane		MS ND	0.640	91	(77-130)			0.706 mg/Kg	09/18/2008
		MSD	0.642	91		0	(< 20)	0.706 mg/Kg	09/18/2008
1,1-Dichloroethane		MS ND	0.631	89	(80-120)			0.706 mg/Kg	09/18/2008
		MSD	0.671	95		6	(< 20)	0.706 mg/Kg	09/18/2008
2-Chlorotoluene		MS ND	0.686	97	(80-123)			0.706 mg/Kg	09/18/2008
		MSD	0.693	98		1	(< 20)	0.706 mg/Kg	09/18/2008
Trichloroethene		MS ND	0.693	98	(80-122)			0.706 mg/Kg	09/18/2008
		MSD	0.674	96		3	(< 20)	0.706 mg/Kg	09/18/2008
trans-1,2-Dichloroethene		MS ND	0.666	94	(80-126)			0.706 mg/Kg	09/18/2008
		MSD	0.682	97		2	(< 20)	0.706 mg/Kg	09/18/2008
1,2-Dichlorobenzene		MS ND	0.673	95	(80-120)			0.706 mg/Kg	09/18/2008
		MSD	0.673	95		0	(< 20)	0.706 mg/Kg	09/18/2008
2,2-Dichloropropane		MS ND	0.639	91	(80-134)			0.706 mg/Kg	09/18/2008
		MSD	0.620	88		3	(< 20)	0.706 mg/Kg	09/18/2008
Hexachlorobutadiene		MS ND	0.713	101	(78-133)			0.706 mg/Kg	09/18/2008
		MSD	0.716	101		0	(< 20)	0.706 mg/Kg	09/18/2008
Isopropylbenzene (Cumene)		MS ND	0.758	107	(80-120)			0.706 mg/Kg	09/18/2008
		MSD	0.758	107		0	(< 20)	0.706 mg/Kg	09/18/2008
2-Hexanone		MS ND	1.78	84	(63-125)			2.12 mg/Kg	09/18/2008
		MSD	1.91	90		7	(< 20)	2.12 mg/Kg	09/18/2008
1,2-Dichloropropane		MS ND	0.693	98	(80-120)			0.706 mg/Kg	09/18/2008
		MSD	0.686	97		1	(< 20)	0.706 mg/Kg	09/18/2008
1,1-Dichloropropene		MS ND	0.746	106	(80-124)			0.706 mg/Kg	09/18/2008
		MSD	0.738	105		1	(< 20)	0.706 mg/Kg	09/18/2008
1,1,2-Trichloroethane		MS ND	0.690	98	(82-120)			0.706 mg/Kg	09/18/2008
		MSD	0.708	100		3	(< 20)	0.706 mg/Kg	09/18/2008
1,3-Dichlorobenzene		MS ND	0.647	92	(80-120)			0.706 mg/Kg	09/18/2008
		MSD	0.653	93		1	(< 20)	0.706 mg/Kg	09/18/2008
1,2,3-Trichlorobenzene		MS ND	0.769	109	(77-126)			0.706 mg/Kg	09/18/2008
		MSD	0.799	113		4	(< 20)	0.706 mg/Kg	09/18/2008
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>		MS	0.668	95	(80-137)				09/18/2008
		MSD	0.670	95		0			09/18/2008
Toluene-d8 <surr>		MS	0.761	108	(80-122)				09/18/2008
		MSD	0.762	108		0			09/18/2008
4-Bromofluorobenzene <surr>		MS	1.60	85	(42-147)				09/18/2008
		MSD	1.67	89		4			09/18/2008



SGS Ref.# 857833 Matrix Spike  
857834 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18726  
Method Vol. Extraction SW8260 Field I  
Date 09/18/2008

Original 857832  
Matrix Solid/Soil (Wet Weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Batch VMS10111  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 858279 Matrix Spike  
858280 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method Vol. Extraction SW8260 Field I  
Date 09/19/2008

Original 1085018011  
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:  
1084993001, 1084993002, 1084993003, 1084993004, 1084993007

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 858279 Matrix Spike Printed Date/Time 10/01/2008 16:23  
 858280 Matrix Spike Duplicate Prep Batch VXX18734  
 Method Vol. Extraction SW8260 Field I  
 Date 09/19/2008  
 Original 1085018011  
 Matrix Soil/Solid (dry weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	MS	ND	0.809	96	(80-125)			0.844 mg/Kg	09/19/2008
	MSD		0.798	95		1	(< 20)	0.844 mg/Kg	09/19/2008
Toluene	MS	ND	0.845	100	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.867	103		3	(< 20)	0.844 mg/Kg	09/19/2008
Ethylbenzene	MS	ND	0.876	104	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.895	106		2	(< 20)	0.844 mg/Kg	09/19/2008
n-Butylbenzene	MS	ND	0.886	105	(80-123)			0.844 mg/Kg	09/19/2008
	MSD		0.856	101		4	(< 20)	0.844 mg/Kg	09/19/2008
1,4-Dichlorobenzene	MS	ND	0.868	103	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.822	97		5	(< 20)	0.844 mg/Kg	09/19/2008
1,2-Dichloroethane	MS	ND	0.713	84	(80-133)			0.844 mg/Kg	09/19/2008
	MSD		0.736	87		3	(< 20)	0.844 mg/Kg	09/19/2008
1,3,5-Trimethylbenzene	MS	ND	0.859	102	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.833	99		3	(< 20)	0.844 mg/Kg	09/19/2008
4-Chlorotoluene	MS	ND	0.825	98	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.795	94		4	(< 20)	0.844 mg/Kg	09/19/2008
Chlorobenzene	MS	ND	0.825	98	(80-122)			0.844 mg/Kg	09/19/2008
	MSD		0.845	100		2	(< 20)	0.844 mg/Kg	09/19/2008
4-Methyl-2-pentanone (MIBK)	MS	ND	2.65	105	(76-120)			2.53 mg/Kg	09/19/2008
	MSD		2.67	105		1	(< 20)	2.53 mg/Kg	09/19/2008
cis-1,2-Dichloroethene	MS	ND	0.888	105	(80-124)			0.844 mg/Kg	09/19/2008
	MSD		0.886	105		0	(< 20)	0.844 mg/Kg	09/19/2008
4-Isopropyltoluene	MS	ND	0.895	106	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.874	104		2	(< 20)	0.844 mg/Kg	09/19/2008
Methyl-t-butyl ether	MS	ND	1.24	98	(78-123)			1.27 mg/Kg	09/19/2008
	MSD		1.27	100		2	(< 20)	1.27 mg/Kg	09/19/2008
cis-1,3-Dichloropropene	MS	ND	0.927	110	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.945	112		2	(< 20)	0.844 mg/Kg	09/19/2008
n-Propylbenzene	MS	ND	0.877	104	(80-122)			0.844 mg/Kg	09/19/2008
	MSD		0.850	101		3	(< 20)	0.844 mg/Kg	09/19/2008
Styrene	MS	ND	0.935	111	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.957	113		2	(< 20)	0.844 mg/Kg	09/19/2008
Dibromomethane	MS	ND	0.773	92	(79-126)			0.844 mg/Kg	09/19/2008
	MSD		0.816	97		5	(< 20)	0.844 mg/Kg	09/19/2008
trans-1,3-Dichloropropene	MS	ND	0.857	102	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.870	103		2	(< 20)	0.844 mg/Kg	09/19/2008
1,2,4-Trichlorobenzene	MS	ND	0.952	113	(80-122)			0.844 mg/Kg	09/19/2008
	MSD		0.915	109		4	(< 20)	0.844 mg/Kg	09/19/2008
1,1,2,2-Tetrachloroethane	MS	ND	0.968	115	(79-120)			0.844 mg/Kg	09/19/2008
	MSD		0.879	104		10	(< 20)	0.844 mg/Kg	09/19/2008





SGS Ref.# 858279 Matrix Spike  
858280 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18734  
Method Vol. Extraction SW8260 Field I  
Date 09/19/2008

Original 1085018011  
Matrix Soil/Solid (dry weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
1,2-Dibromo-3-chloropropane	MS	ND	0.879	104	(64-128)			0.844 mg/Kg	09/19/2008
	MSD		0.823	98		7	(< 20)	0.844 mg/Kg	09/19/2008
Tetrachloroethene	MS	ND	0.876	104	(78-124)			0.844 mg/Kg	09/19/2008
	MSD		0.898	106		3	(< 20)	0.844 mg/Kg	09/19/2008
Dibromochloromethane	MS	ND	0.818	97	(80-122)			0.844 mg/Kg	09/19/2008
	MSD		0.834	99		2	(< 20)	0.844 mg/Kg	09/19/2008
1,3-Dichloropropane	MS	ND	0.808	96	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.818	97		1	(< 20)	0.844 mg/Kg	09/19/2008
1,2-Dibromoethane	MS	ND	0.868	103	(80-121)			0.844 mg/Kg	09/19/2008
	MSD		0.876	104		1	(< 20)	0.844 mg/Kg	09/19/2008
Carbon tetrachloride	MS	ND	0.760	90	(73-133)			0.844 mg/Kg	09/19/2008
	MSD		0.785	93		3	(< 20)	0.844 mg/Kg	09/19/2008
1,1,1,2-Tetrachloroethane	MS	ND	0.813	96	(78-125)			0.844 mg/Kg	09/19/2008
	MSD		0.827	98		2	(< 20)	0.844 mg/Kg	09/19/2008
Chloroform	MS	ND	0.723	86	(80-124)			0.844 mg/Kg	09/19/2008
	MSD		0.733	87		1	(< 20)	0.844 mg/Kg	09/19/2008
Bromobenzene	MS	ND	0.858	102	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.837	99		2	(< 20)	0.844 mg/Kg	09/19/2008
Chloromethane	MS	ND	1.03	122	(68-129)			0.844 mg/Kg	09/19/2008
	MSD		1.04	123		1	(< 20)	0.844 mg/Kg	09/19/2008
1,2,3-Trichloropropane	MS	ND	0.864	102	(75-121)			0.844 mg/Kg	09/19/2008
	MSD		0.812	96		6	(< 20)	0.844 mg/Kg	09/19/2008
Bromomethane	MS	ND	0.877	104	(52-140)			0.844 mg/Kg	09/19/2008
	MSD		0.934	111		6	(< 20)	0.844 mg/Kg	09/19/2008
Bromochloromethane	MS	ND	0.818	97	(78-125)			0.844 mg/Kg	09/19/2008
	MSD		0.833	99		2	(< 20)	0.844 mg/Kg	09/19/2008
Vinyl chloride	MS	ND	1.07	127*	(78-125)			0.844 mg/Kg	09/19/2008
	MSD		1.15	137*		8	(< 20)	0.844 mg/Kg	09/19/2008
Dichlorodifluoromethane	MS	ND	1.22	144*	(67-135)			0.844 mg/Kg	09/19/2008
	MSD		1.23	145*		1	(< 20)	0.844 mg/Kg	09/19/2008
Chloroethane	MS	ND	0.764	91	(53-141)			0.844 mg/Kg	09/19/2008
	MSD		0.985	117		25 *	(< 20)	0.844 mg/Kg	09/19/2008
sec-Butylbenzene	MS	ND	0.972	115	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.935	111		4	(< 20)	0.844 mg/Kg	09/19/2008
Bromodichloromethane	MS	ND	0.743	88	(80-126)			0.844 mg/Kg	09/19/2008
	MSD		0.757	90		2	(< 20)	0.844 mg/Kg	09/19/2008
1,1-Dichloroethene	MS	ND	0.829	98	(73-126)			0.844 mg/Kg	09/19/2008
	MSD		0.751	89		10	(< 20)	0.844 mg/Kg	09/19/2008
2-Butanone (MEK)	MS	ND	2.43	96	(70-124)			2.53 mg/Kg	09/19/2008
	MSD		2.39	94		2	(< 20)	2.53 mg/Kg	09/19/2008



SGS Ref.# 858279 Matrix Spike Printed Date/Time 10/01/2008 16:23  
 858280 Matrix Spike Duplicate Prep Batch VXX18734  
 Method Vol. Extraction SW8260 Field I  
 Date 09/19/2008  
 Original 1085018011  
 Matrix Soil/Solid (dry weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Methylene chloride	MS	ND	0.890	106	(76-124)			0.844 mg/Kg	09/19/2008
	MSD		0.881	104		1	(< 20)	0.844 mg/Kg	09/19/2008
Trichlorofluoromethane	MS	ND	0.900	107	(58-172)			0.844 mg/Kg	09/19/2008
	MSD		0.907	108		1	(< 20)	0.844 mg/Kg	09/19/2008
P & M -Xylene	MS	ND	1.72	102	(80-120)			1.69 mg/Kg	09/19/2008
	MSD		1.77	105		2	(< 20)	1.69 mg/Kg	09/19/2008
Naphthalene	MS	ND	0.991	117	(71-121)			0.844 mg/Kg	09/19/2008
	MSD		0.926	110		7	(< 20)	0.844 mg/Kg	09/19/2008
o-Xylene	MS	ND	0.910	108	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.947	112		4	(< 20)	0.844 mg/Kg	09/19/2008
Bromoform	MS	ND	0.900	107	(74-129)			0.844 mg/Kg	09/19/2008
	MSD		0.858	102		5	(< 20)	0.844 mg/Kg	09/19/2008
Xylenes (total)	MS	ND	2.64	104	(80-120)			2.53 mg/Kg	09/19/2008
	MSD		2.71	107		3	(< 20)	2.53 mg/Kg	09/19/2008
1,2,4-Trimethylbenzene	MS	ND	0.865	103	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.847	100		2	(< 20)	0.844 mg/Kg	09/19/2008
tert-Butylbenzene	MS	ND	0.895	106	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.877	104		2	(< 20)	0.844 mg/Kg	09/19/2008
1,1,1-Trichloroethane	MS	ND	0.758	90	(77-130)			0.844 mg/Kg	09/19/2008
	MSD		0.770	91		1	(< 20)	0.844 mg/Kg	09/19/2008
1,1-Dichloroethane	MS	ND	0.758	90	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.769	91		1	(< 20)	0.844 mg/Kg	09/19/2008
2-Chlorotoluene	MS	ND	0.850	101	(80-123)			0.844 mg/Kg	09/19/2008
	MSD		0.825	98		3	(< 20)	0.844 mg/Kg	09/19/2008
Trichloroethene	MS	ND	0.814	96	(80-122)			0.844 mg/Kg	09/19/2008
	MSD		0.791	94		3	(< 20)	0.844 mg/Kg	09/19/2008
trans-1,2-Dichloroethene	MS	ND	0.816	97	(80-126)			0.844 mg/Kg	09/19/2008
	MSD		0.823	98		1	(< 20)	0.844 mg/Kg	09/19/2008
1,2-Dichlorobenzene	MS	ND	0.854	101	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.804	95		6	(< 20)	0.844 mg/Kg	09/19/2008
2,2-Dichloropropane	MS	ND	0.757	90	(80-134)			0.844 mg/Kg	09/19/2008
	MSD		0.764	91		1	(< 20)	0.844 mg/Kg	09/19/2008
Hexachlorobutadiene	MS	ND	0.871	103	(78-133)			0.844 mg/Kg	09/19/2008
	MSD		0.854	101		2	(< 20)	0.844 mg/Kg	09/19/2008
Isopropylbenzene (Cumene)	MS	ND	0.918	109	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.929	110		1	(< 20)	0.844 mg/Kg	09/19/2008
2-Hexanone	MS	ND	2.27	90	(63-125)			2.53 mg/Kg	09/19/2008
	MSD		2.14	85		6	(< 20)	2.53 mg/Kg	09/19/2008
1,2-Dichloropropane	MS	ND	0.828	98	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.839	99		1	(< 20)	0.844 mg/Kg	09/19/2008



SGS Ref.# 858279 Matrix Spike  
 858280 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
 Prep Batch VXX18734  
 Method Vol. Extraction SW8260 Field I  
 Date 09/19/2008

Original 1085018011  
 Matrix Soil/Solid (dry weight)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
1,1-Dichloropropene	MS	ND	0.881	104	(80-124)			0.844 mg/Kg	09/19/2008
	MSD		0.881	104		0	(< 20)	0.844 mg/Kg	09/19/2008
1,1,2-Trichloroethane	MS	ND	0.844	100	(82-120)			0.844 mg/Kg	09/19/2008
	MSD		0.832	99		1	(< 20)	0.844 mg/Kg	09/19/2008
1,3-Dichlorobenzene	MS	ND	0.815	97	(80-120)			0.844 mg/Kg	09/19/2008
	MSD		0.788	93		3	(< 20)	0.844 mg/Kg	09/19/2008
1,2,3-Trichlorobenzene	MS	ND	0.977	116	(77-126)			0.844 mg/Kg	09/19/2008
	MSD		0.921	109		6	(< 20)	0.844 mg/Kg	09/19/2008

<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	MS		0.785	93	(80-137)				09/19/2008
	MSD		0.798	95		2			09/19/2008
Toluene-d8 <surr>	MS		0.890	106	(80-122)				09/19/2008
	MSD		0.903	107		1			09/19/2008
4-Bromofluorobenzene <surr>	MS		2.00	97	(42-147)				09/19/2008
	MSD		1.95	95		2			09/19/2008

Batch VMS10117  
 Method SW8260B  
 Instrument HP 5890 Series II MS1 VMA



SGS Ref.# 858594 Matrix Spike  
858595 Matrix Spike Duplicate

Printed Date/Time 10/01/2008 16:23  
Prep Batch VXX18739  
Method Vol. Extraction SW8260 Field I  
Date 09/22/2008

Original 858854  
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:  
1084993002, 1084993003, 1084993004, 1084993007

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Toluene	MS	ND	0.808	103	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.793	101		2	(< 20)	0.784 mg/Kg	09/22/2008
Ethylbenzene	MS	ND	0.831	106	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.824	105		1	(< 20)	0.784 mg/Kg	09/22/2008
n-Butylbenzene	MS	ND	0.821	105	(80-123)			0.784 mg/Kg	09/22/2008
	MSD		0.845	108		3	(< 20)	0.784 mg/Kg	09/22/2008
Carbon disulfide	MS	ND	1.29	110	(61-135)			1.18 mg/Kg	09/22/2008
	MSD		1.27	108		1	(< 20)	1.18 mg/Kg	09/22/2008
1,3,5-Trimethylbenzene	MS	ND	0.770	98	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.792	101		3	(< 20)	0.784 mg/Kg	09/22/2008
4-Isopropyltoluene	MS	ND	0.801	102	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.839	107		5	(< 20)	0.784 mg/Kg	09/22/2008
n-Propylbenzene	MS	ND	0.778	99	(80-122)			0.784 mg/Kg	09/22/2008
	MSD		0.795	101		2	(< 20)	0.784 mg/Kg	09/22/2008
P & M -Xylene	MS	ND	1.64	105	(80-120)			1.57 mg/Kg	09/22/2008
	MSD		1.62	103		1	(< 20)	1.57 mg/Kg	09/22/2008
Naphthalene	MS	ND	0.885	113	(71-121)			0.784 mg/Kg	09/22/2008
	MSD		0.972	124*		10	(< 20)	0.784 mg/Kg	09/22/2008
o-Xylene	MS	ND	0.870	111	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.880	112		1	(< 20)	0.784 mg/Kg	09/22/2008
1,2,4-Trimethylbenzene	MS	ND	0.778	99	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.807	103		4	(< 20)	0.784 mg/Kg	09/22/2008
Isopropylbenzene (Cumene)	MS	ND	0.877	112	(80-120)			0.784 mg/Kg	09/22/2008
	MSD		0.861	110		2	(< 20)	0.784 mg/Kg	09/22/2008
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	MS		0.715	91	(80-137)				09/22/2008
	MSD		0.718	92		1			09/22/2008
Toluene-d8 <surr>	MS		0.863	110	(80-122)				09/22/2008
	MSD		0.832	106		4			09/22/2008
4-Bromofluorobenzene <surr>	MS		1.73	90	(42-147)				09/22/2008
	MSD		1.78	93		3			09/22/2008

Batch VMS10119  
Method SW8260B  
Instrument HP 5890 Series II MS1 VMA

1084993



Shannon & Wilson, Inc.

400 N. 34th Street, Suite 100  
Seattle, WA 98103  
(206) 632-8020

2355 Hill Road  
Fairbanks, AK 99707  
(907) 479-0600

5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518  
(907) 561-2120

Today Record

Page 1 of 1  
Laboratory SES  
Attn: CAROLAN

Analysis Parameters: Sample Container Description  
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp. Grab	VC (Breath)	VC (Cap)	VC (Bottle)	VC (Bottle)	VC (Bottle)	Total Number of Containers	Remarks/Matrix
1417-090908-001	① AB	0945	9-9-08	✓	✓	✓	✓	✓	✓	2	SOIL (CONTAM.)
1417-090908-002	②	1315	9-9-08	✓	✓	✓	✓	✓	✓	2	(CONTAM.)
1417-090908-003	③	1445	9-9-08	✓	✓	✓	✓	✓	✓	2	CONTAM.
1417-090908-004	④	1320	9-9-08	✓	✓	✓	✓	✓	✓	2	(CONTAM.)
1417-091108-005	⑤	1000	9-11-08	✓	✓	✓	✓	✓	✓	2	
1417-091108-006	⑥ ↓	1300	9-11-08	✓	✓	✓	✓	✓	✓	2	
1417-090908-TB	⑦ A	—	9-9-08	✓	✓	✓	✓	✓	✓	1	SES PREPARED BY [Signature]
										13	

**Project Information**

Project Number: 1417-002  
 Project Name: MARK AIR  
 Contact: JULIE KEENER  
 Ongoing Project? Yes  No   
 Sampler: PETER GREY

**Sample Receipt**

Total Number of Containers  
 COC Seals/Intact? Y/N/A  
 Received Good Cond./Cold  
 Delivery Method:  
 (attach shipping bill, if any)

**Instructions**

Requested Turn Around Time: STANDARD  
 Special Instructions: PRO jars for samples  
 002 and -004 have limited volume

**Relinquished By: 1.**  
 Signature: [Signature] Time: 4:45  
 Printed Name: Andrea Carlson  
 Company: SW

**Relinquished By: 2.**  
 Signature: [Signature] Time: 10:30  
 Printed Name: ARMON BRENE  
 Company: SES

**Relinquished By: 3.**  
 Signature: [Signature] Time: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_  
 Company: \_\_\_\_\_

**Received By: 1.**  
 Signature: [Signature] Time: 4:45  
 Printed Name: ARMON BRENE  
 Company: SES

**Received By: 2.**  
 Signature: [Signature] Time: \_\_\_\_\_  
 Printed Name: CAROLAN  
 Company: SES

**Received By: 3.**  
 Signature: [Signature] Time: 6:40  
 Printed Name: Joe Reed  
 Company: SES

TB=3.4 C=4.9



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: 9/15/08

Received Time: 1445

Is date/time conversion necessary? NO

# of hours to AK Local Time: N/A

Thermometer ID: FBX710

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>3.4 °C</u>	<u>4.9 °C</u>
_____	_____ °C	_____ °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 / Carlisle /
- 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 out for DoD projects (USACE, Navy, AFCEE)**

Yes	No		Samples/Analyses Affected:
_____	_____	Is received temperature $4 \pm 2^\circ\text{C}$ ?	_____
_____	_____	Exceptions: _____	_____
_____	_____	If temperature(s) $< 0^\circ\text{C}$ , were containers ice-free? <u>N/A</u>	_____
_____	_____	<i>Notify PM immediately of any ice in samples.</i>	_____
_____	_____	Was there an airbill? (Note # above in the right hand column)	_____
_____	_____	Was cooler sealed with custody seals? # / where: _____	_____
_____	_____	Were seal(s) intact upon arrival?	_____
_____	_____	Was there a COC with cooler?	_____
_____	_____	Was COC sealed in plastic bag & taped inside lid of cooler?	_____
_____	_____	Was the COC filled out properly?	_____
_____	_____	Did the COC indicate USACE / Navy / AFCEE project?	_____
_____	_____	Did the COC and samples correspond?	_____
_____	_____	Were all sample packed to prevent breakage? Packing material: _____	_____
_____	_____	Were all samples unbroken and clearly labeled?	_____
_____	_____	Were all samples sealed in separate plastic bags?	_____
_____	_____	Were all VOCs free of headspace and/or MeOH preserved?	_____
_____	_____	Were correct container / sample sizes submitted?	_____
_____	_____	Is sample condition good?	_____
_____	_____	Was copy of CoC, SRF, and custody seals given to PM to fax?	_____

**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: \_\_\_\_\_

Notes: \_\_\_\_\_

Completed by (sign): Carmon Beene (print): CARMON BEENE

Login proof (check one): waived \_\_\_\_\_ required \_\_\_\_\_ performed by: Joe Rudi



SGS WO#

1084993

**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: 9/16/08 0940  
Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No NO  
Number of Hours From Alaska Local Time:             
Foreign Soil? Yes \_\_\_\_\_ No ✓

Delivery method to Anchorage (circle all that apply):

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

Other: \_\_\_\_\_

Airbill # \_\_\_\_\_

**COOLER AND TEMP BLANK READINGS\***

<u>Cooler ID</u>	<u>Temp Blank (°C)</u>	<u>Cooler (°C)</u>	<u>Cooler ID</u>	<u>Temp Blank (°C)</u>	<u>Cooler (°C)</u>
<u>1</u>	<u>5.1</u>	<u>3.7</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CUSTODY SEALS INTACT: YES / NO  
# / WHERE: 2, 1 on front + 1 on back

COMPLETED BY: \_\_\_\_\_

\*Temperature readings include thermometer correction factors.





**SGS** Environmental

**CUSTODY SEAL**

W#4993

Signature:

*Carmen Beene*

Date/Time:

9/15/08 1030

**SGS** Environmental

**CUSTODY SEAL**

W#4993

*Carmen Beene*

Date/Time:

9/15/08 1030

1084993



## LABORATORY DATA REVIEW CHECKLIST

(NOTE: NA = not applicable)

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?  Yes / No
- 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 /  NA

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?  Yes / No
- b. Were the correct analyses requested?  Yes / No

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ}$  C)?  Yes / No
- b. Sample preservation acceptable - acidified waters, MeOH-preserved VOC soil (GRO, BTEX, VOCs, etc.)?  Yes / No
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)?  NA / Yes / No
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)?  NA / Yes / No
- e. Data quality or usability affected? Yes (explain)  No

### 4. Case Narrative

- a. Present and understandable?  Yes / No (explain)
- b. Discrepancies, errors or QC failures noted by the lab? NA  Yes / No (explain)
- c. Were all corrective actions documented?  NA / Yes / No (explain) – Note: No corrective actions were required.

d. Is there an effect on data quality/usability, according to the case narrative? NA / No / **Yes** (explain) – Note: the case narrative indicates the samples from MW-10, Boring A, and Boring B were extracted one day past the holding-time limit; these samples may be biased low.

### 5. Sample Results

a. Correct analyses performed/reported as requested on COC? **Yes** / No (explain)

b. All applicable holding times met? Yes / **No** See note above.

c. All soils reported on a dry-weight basis? NA / **Yes** / No

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? Yes / **No** (explain only for non-detects with elevated PQLs) – Note: the PQLs for 1,2-dichloroethane exceeded the ADEC soil cleanup level for the trip blank and each of the soil samples submitted for VOC analysis. This analyte was not detected in the samples, but may be present at a concentration between the cleanup level and the PQL.

e. Data quality or usability affected? No / **Yes** (explain) – Note: the case narrative indicates the samples from MW-10, Boring A, and Boring B were extracted one day past the holding-time limit; these samples may be biased low.

### 6. QC Samples

#### **a. Method Blank**

i. Is at least one method blank (MB) reported per matrix, analysis, and 20 samples? **Yes** / No

ii. Are all method blank results less than PQL? **Yes** / No

iii. If MB above PQL, what samples are affected?

iv. Do the affected sample(s) have data flags? Yes / No / **NA**

If so, are the data flags clearly defined? Yes / No / **NA**

v. Are data quality or usability affected? **No** (i.e., MB data are acceptable) / Yes (Explain)

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

i. Organics - Is at least one LCS/LCSD reported per matrix, analysis, and 20 samples?

NA / **Yes** / No

ii. Metals/Inorganics - Is at least one LCS and one sample duplicate reported per matrix, analysis and 20 samples? NA / **Yes** / No

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? [AK petroleum methods %R < 20%; other analyses, refer to lab QC pages] Yes  No (explain) – **Note: the LCS recovery for dichlorodifluoromethane was above the laboratory's limit. This analyte was not detected in associated samples, and the results were not affected.**

iv. Precision – Are all relative percent differences (RPDs) reported and less than method or laboratory limits, or project-specified DQOs?  Yes / No (explain)

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

vi. Do the affected samples(s) have data flags?  NA / Yes / No (explain)

If so, are the data flags clearly defined?

vii. Is the data quality or usability affected?  No or explain.

**c. Surrogates - Organics Only**

i. Are surrogate recoveries reported for organic analyses, including field, QC and laboratory samples?  Yes / No

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? Yes  No

iii. Do the sample results with failed surrogate recoveries have data flags? NA  Yes / No (explain)

If so, are the data flags clearly defined?  Yes / No / NA

iv. Is the data quality or usability affected? No or  explain – **Note: the GRO surrogate in the samples from MW-10 and Boring A was recovered above the laboratory control limit due to hydrocarbon interference. The LCS analyses associated with these samples were acceptable, and the GRO results should be considered accurate.**

**d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)**

i. Is at least one trip blank (TB) reported per matrix, analysis and cooler? NA /  Yes / No

ii. Are all results less than the PQL? NA /  Yes / No

iii. If TB is above the PQL, what samples are affected?  NA or list samples

iv. Is the data quality or usability affected?  No or explain.

**e. Field Duplicate**

i. Was at least one field duplicate submitted per matrix, analysis and 10 project samples?

**Yes**/ No – Note: duplicate samples were collected from Boring A.

ii. Were the field duplicates submitted blind to the lab? **Yes**/ No / NA

iii. Precision – Are all relative percent differences (RPDs) less than specified DQOs (recommended: 30% for water, 50% for soil) ? Yes / **No** / NA – Note: the RPDs for benzene, toluene, and n-butyl benzene were greater than 50%.

iv. Is the data quality or usability affected? **No** / Yes (explain) – Note: we will assume the higher of the two replicate values for benzene, toluene, and n-butyl benzene in the samples from Boring A represent the soil quality at that location.

**f. Decontamination or Equipment Blank (if applicable)**

**Not Applicable** or ...

i. Are all results less than the PQL? Yes / No

ii. If results are above PQL, what samples are affected? NA or list

iii. Is the data quality or usability affected? Explain.

**7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)**

**Not applicable** or ...

a. Are they defined and appropriate? Yes / No

**Completed by:** Jon Lindstrom, Ph.D.

**Title:** Chemist

**Date:** November 5, 2008

**Consultant Firm:** Shannon & Wilson, Inc.

**CS Report Name:** Groundwater Investigation

**Laboratory Report Date:** October 1, 2008

**Laboratory Name:** SGS Environmental Services, Inc.

**Laboratory Report Numbers:** 1084993

**ADEC File Number:** 100.26.043

**ADEC Hazard ID:** 22871



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

Project: 31-1-11417-002 Mark Air  
Client: Shannon & Wilson-Fairbanks  
SGS Work Order: 1085856

Released by:

**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.



CASE NARRATIVE

Print Date: 11/17/2008

Client Name: Shannon & Wilson-Fairbanks  
Project Name: 31-1-11417-002 Mark Air  
Workorder No.: 1085856

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>
1085856001	PS	1417-MW-16
	AK102 - The pattern is consistent with a weathered gasoline.	
870339	MB	MB for HBN 208828 [VXX/19010]
	MB - AF blank result for benzene is greater than one-half the PQL but less than PQL.	
870952	MB	MB for HBN 208952 [XXX/20360]
	AK103 - MB result is greater than one-half the PQL, but less than PQL.	



## Laboratory Analytical Report

Client: **Shannon & Wilson-Fairbanks**  
2355 Hill Road  
Fairbanks, AK 99707

Attn: **Rodney Guritz**  
T: (907)479-5691 F:(907)561-4483

Project: **31-1-11417-002 Mark Air**  
Workorder No.: **1085856**

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: 11/17/2008

Client Name: Shannon & Wilson-Fairbanks

Project Name: 31-1-11417-002 Mark Air

Workorder No.: 1085856

Analytical Methods

<u>Method Description</u>	<u>Analytical Method</u>
AK101/8021 Combo.	AK101
AK101/8021 Combo.	SW8021B
DRO Low Volume (W)	AK102

Sample ID Cross Reference

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
085856001	1417-MW-16
085856002	TRIP BLANK



Shannon & Wilson-Fairbanks

Print Date: 11/17/2008

Client Sample ID: 1417-MW-16  
SGS Ref. #: 1085856001  
Project ID: 31-1-11417-002 Mark Air  
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 11/04/08 15:21  
Receipt Date/Time: 11/06/08 09:10

**Volatile Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	9.74	5.00	mg/L	50	VFC9266	VXX19010	
Benzene	4670	25.0	ug/L	50	VFC9266	VXX19010	
Toluene	ND	2.00	ug/L	1	VFC9266	VXX19010	
Ethylbenzene	52.9	2.00	ug/L	1	VFC9266	VXX19010	
o-Xylene	78.0	2.00	ug/L	1	VFC9266	VXX19010	
P & M -Xylene	181	100	ug/L	50	VFC9266	VXX19010	
4-Bromofluorobenzene <surr>	81.8	50-150	%	50	VFC9266	VXX19010	
1,4-Difluorobenzene <surr>	95.3	80-120	%	50	VFC9266	VXX19010	

**Batch Information**

Analytical Batch: VFC9266	Prep Batch: VXX19010	Initial Prep Wt./Vol.: 5 mL
Analytical Method: AK101	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 11/07/08 17:53	Prep Date/Time: 11/07/08 09:00	Container ID:1085856001-A
Dilution Factor: 50		Analyst: HM
Analytical Batch: VFC9266	Prep Batch: VXX19010	Initial Prep Wt./Vol.: 5 mL
Analytical Method: SW8021B	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 11/07/08 14:33	Prep Date/Time: 11/07/08 09:00	Container ID:1085856001-A
Dilution Factor: 1		Analyst: HM
Analytical Batch: VFC9266	Prep Batch: VXX19010	Initial Prep Wt./Vol.: 5 mL
Analytical Method: SW8021B	Prep Method: SW5030B	Prep Extract Vol.: 5 mL
Analysis Date/Time: 11/07/08 17:53	Prep Date/Time: 11/07/08 09:00	Container ID:1085856001-A
Dilution Factor: 50		Analyst: HM



Client Sample ID: 1417-MW-16

SGS Ref. #: 1085856001

Project ID: 31-1-11417-002 Mark Air

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 11/04/08 15:21

Receipt Date/Time: 11/06/08 09:10

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	5.60	0.357	mg/L	1	XFC8365	XXX20360	
5a Androstane <sur>	72	50-150	%	1	XFC8365	XXX20360	

Batch Information

Analytical Batch: XFC8365

Analytical Method: AK102

Analysis Date/Time: 11/14/08 15:22

Dilution Factor: 1

Prep Batch: XXX20360

Prep Method: SW3520C

Prep Date/Time: 11/12/08 17:20

Initial Prep Wt./Vol.: 280 mL

Prep Extract Vol.: 1 mL

Container ID:1085856001-D

Analyst: GL



Client Sample ID: **TRIP BLANK**  
SGS Ref. #: 1085856002  
Project ID: 31-1-11417-002 Mark Air  
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 11/04/08 15:21  
Receipt Date/Time: 11/06/08 09:10

**Volatile Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	ND	0.100	mg/L	1	VFC9266	VXX19010	
Benzene	ND	0.500	ug/L	1	VFC9266	VXX19010	
Toluene	ND	2.00	ug/L	1	VFC9266	VXX19010	
Ethylbenzene	ND	2.00	ug/L	1	VFC9266	VXX19010	
o-Xylene	ND	2.00	ug/L	1	VFC9266	VXX19010	
P & M -Xylene	ND	2.00	ug/L	1	VFC9266	VXX19010	
4-Bromofluorobenzene <surr>	82.7	50-150	%	1	VFC9266	VXX19010	
1,4-Difluorobenzene <surr>	88.9	80-120	%	1	VFC9266	VXX19010	

**Batch Information**

Analytical Batch: VFC9266  
Analytical Method: AK101  
Analysis Date/Time: 11/07/08 14:15  
Dilution Factor: 1

Prep Batch: VXX19010  
Prep Method: SW5030B  
Prep Date/Time: 11/07/08 09:00

Initial Prep Wt./Vol.: 5 mL  
Prep Extract Vol.: 5 mL  
Container ID:1085856002-A  
Analyst: HM

Analytical Batch: VFC9266  
Analytical Method: SW8021B  
Analysis Date/Time: 11/07/08 14:15  
Dilution Factor: 1

Prep Batch: VXX19010  
Prep Method: SW5030B  
Prep Date/Time: 11/07/08 09:00

Initial Prep Wt./Vol.: 5 mL  
Prep Extract Vol.: 5 mL  
Container ID:1085856002-A  
Analyst: HM



SGS Ref.# 870334 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 11/17/2008 12:18  
Prep Batch VXX19010  
Method SW5030B  
Date 11/07/2008

QC results affect the following production samples:

1085856001, 1085856002

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Gasoline Range Organics ND 0.100 0.0100 mg/L 11/07/08

**Surrogates**

4-Bromofluorobenzene <surr> 84.8 50-150 % 11/07/08

Batch VFC9266  
Method AK101  
Instrument HP 5890 Series II PID+HECD VBA

Benzene 0.237 J 0.500 0.150 ug/L 11/07/08

Toluene ND 2.00 0.620 ug/L 11/07/08

Ethylbenzene ND 2.00 0.620 ug/L 11/07/08

o-Xylene ND 2.00 0.620 ug/L 11/07/08

P & M -Xylene ND 2.00 0.620 ug/L 11/07/08

**Surrogates**

1,4-Difluorobenzene <surr> 88.1 80-120 % 11/07/08

Batch VFC9266  
Method SW8021B  
Instrument HP 5890 Series II PID+HECD VBA



SGS Ref.# 870339 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 11/17/2008 12:18  
Prep Batch VXX19010  
Method SW5030B  
Date 11/07/2008

QC results affect the following production samples:  
1085856001, 1085856002

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Fuels Department</u></b>					
Gasoline Range Organics	ND	0.100	0.0100	mg/L	11/07/08
<b>Surrogates</b>					
4-Bromofluorobenzene <surr>	82.2	50-150		%	11/07/08
Batch	VFC9266				
Method	AK101				
Instrument	HP 5890 Series II PID+HECD VBA				
Benzene	0.391 J	0.500	0.150	ug/L	11/07/08
Toluene	ND	2.00	0.620	ug/L	11/07/08
Ethylbenzene	ND	2.00	0.620	ug/L	11/07/08
o-Xylene	ND	2.00	0.620	ug/L	11/07/08
P & M -Xylene	ND	2.00	0.620	ug/L	11/07/08
<b>Surrogates</b>					
1,4-Difluorobenzene <surr>	88.8	80-120		%	11/07/08
Batch	VFC9266				
Method	SW8021B				
Instrument	HP 5890 Series II PID+HECD VBA				



SGS Ref.# 870952 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 11/17/2008 12:18  
Prep Batch XXX20360  
Method SW3520C  
Date 11/12/2008

QC results affect the following production samples:

1085856001

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics 0.146 J 0.400 0.0800 mg/L 11/14/08

**Surrogates**

5a Androstane <surr> 85.2 60-120 % 11/14/08

Batch XFC8365  
Method AK102  
Instrument HP 6890 Series II FID SV D R





SGS Ref.# 870335 Lab Control Sample  
 870336 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 11/17/2008 12:18  
 Prep Batch VXX19010  
 Method SW5030B  
 Date 11/07/2008

QC results affect the following production samples:  
 1085856001, 1085856002

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	95.4	95	( 80-120 )		100 ug/L	11/07/2008
	LCSD	100	100		5	(< 20 )	100 ug/L 11/07/2008
Toluene	LCS	98.3	98	( 80-120 )		100 ug/L	11/07/2008
	LCSD	98.8	99		0	(< 20 )	100 ug/L 11/07/2008
Ethylbenzene	LCS	105	105	( 87-125 )		100 ug/L	11/07/2008
	LCSD	101	101		3	(< 20 )	100 ug/L 11/07/2008
o-Xylene	LCS	100	100	( 85-120 )		100 ug/L	11/07/2008
	LCSD	98.7	99		2	(< 20 )	100 ug/L 11/07/2008
P & M -Xylene	LCS	207	104	( 87-125 )		200 ug/L	11/07/2008
	LCSD	202	101		3	(< 20 )	200 ug/L 11/07/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		98	( 80-120 )			11/07/2008
	LCSD		96		1		11/07/2008

Batch VFC9266  
 Method SW8021B  
 Instrument HP 5890 Series II PID+HECD VBA



SGS Ref.# 870337 Lab Control Sample  
 870338 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-002 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 11/17/2008 12:18  
 Prep Batch VXX19010  
 Method SW5030B  
 Date 11/07/2008

QC results affect the following production samples:  
 1085856001, 1085856002

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	0.199	99	( 60-120 )		0.200 mg/L	11/07/2008
	LCSD	0.193	96		3 (< 20)	0.200 mg/L	11/07/2008
<b><u>Surrogates</u></b>							
4-Bromofluorobenzene <surr>	LCS		86	( 50-150 )			11/07/2008
	LCSD		83		3		11/07/2008

Batch VFC9266  
 Method AK101  
 Instrument HP 5890 Series II PID+HECD VBA



SGS Ref.# 870953 Lab Control Sample  
870954 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-002 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 11/17/2008 12:18  
Prep Batch XXX20360  
Method SW3520C  
Date 11/12/2008

QC results affect the following production samples:  
1085856001

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Semivolatile Organic Fuels Department</b>							
Diesel Range Organics	LCS	17.9	90	( 75-125 )		20 mg/L	11/14/2008
	LCSD	17.3	87		3 (< 20)	20 mg/L	11/14/2008
<b>Surrogates</b>							
5a Androstane <surr>	LCS		92	( 60-120 )			11/14/2008
	LCSD		89		3		11/14/2008

Batch XFC8365  
Method AK102  
Instrument HP 6890 Series II FID SV D R





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? \_\_\_\_\_

- If this is for PWS, provide PWSID, \_\_\_\_\_
- Will courier charges apply?
- Method of payment? \_\_\_\_\_
- Data package required? (Level: 1 / 2 / 3 / 4)
- Notes: \_\_\_\_\_
- Is this a DoD project? (USACE, Navy, AFCEE)

TAT (circle one) Standard or Rush  
 Received Date: 11/05/08  
 Received Time: 1115  
 Is date/time conversion necessary? NO  
 # of hours to AK Local Time: N/A  
 Thermometer ID: TBXB

Cooler ID	Temp Blank	Cooler Temp
1	3.4 °C	3.2 °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 / Carille /  
 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 out for DoD projects (USACE, Navy, AFCEE)

Yes No

- Is received temperature  $\pm 0.2^\circ\text{C}$ ?
- Exceptions: \_\_\_\_\_ Samples/Analyses Affected: \_\_\_\_\_
- If temperature(s)  $< 0^\circ\text{C}$ , were containers ice-free? N/A  
*Note: PM immediately if any ice in sample*
- Was there an anomaly? (Note: # above in the right hand column)
- Was cooler sealed with custody seals?  
# / where: \_\_\_\_\_
- Were seal(s) intact upon arrival?
- Was there a COC with cooler?
- Was COC sealed in plastic bag & taped inside lid of cooler?
- Was the COC filled out properly?
- Did the COC indicate USACE / Navy / AFCEE project?
- Did the COC and samples correspond?
- Were all sample packed to prevent breakage?  
Packing material: \_\_\_\_\_
- Were all samples unbroken and clearly labeled?
- Were all samples sealed in separate plastic bags?
- Were all VOCs free of headspace and/or MeOH preserved?
- Were correct container / sample sizes submitted?
- Is sample condition good?
- Was copy of CoC, SRF, and custody seals given to PM to fax?

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: \_\_\_\_\_

Notes: \_\_\_\_\_

Completed by (sign): Carmon Bee ne (print): CARMON BEENE  
 Login proof (check one): waived \_\_\_\_\_ required  performed by: \_\_\_\_\_



1085856

SGS WO#:



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: 11-6-08 0910

Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No

Number of Hours From Alaska Local Time: \_\_\_\_\_

Foreign Soil? Yes \_\_\_\_\_ No

Delivery method to Anchorage (circle all that apply):

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

Other: \_\_\_\_\_

Airbill # \_\_\_\_\_

COOLER AND TEMP BLANK READINGS\* 70d

Cooler ID	Temp Blank (°C)	Cooler (°C)	Cooler ID	Temp Blank (°C)	Cooler (°C)
<u>1</u>	<u>2.0</u>	<u>2.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CUSTODY SEALS INTACT: YES / NO

#1 WHERE: FRONT & BACK TOP LID

COMPLETED BY: [Signature]

\*Temperature readings include thermometer correction factors.



1085856



**SGS** Environmental

CUSTODY SEAL

W# 5057, 5054, 5055, 5056

*Cameron Beene*

Signature:

Date/Time: 11/05/08 11:15

**SGS** Environmental

CUSTODY SEAL

W# 5053, 5054, 5055  
5056

*Cameron Beene*

Signature:

Date/Time: 11/05/08 11:15





## LABORATORY DATA REVIEW CHECKLIST

(NOTE: NA = not applicable)

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?  Yes / No
- 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 /  NA

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?  Yes / No
- b. Were the correct analyses requested?  Yes / No

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ}$  C)?  Yes / No
- b. Sample preservation acceptable - acidified waters, MeOH-preserved VOC soil (GRO, BTEX, VOCs, etc.)?  Yes / No
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)?  NA / Yes / No
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)?  NA / Yes / No
- e. Data quality or usability affected? Yes (explain) /  No

### 4. Case Narrative

- a. Present and understandable?  Yes / No (explain)
- b. Discrepancies, errors or QC failures noted by the lab? NA /  Yes / No (explain)
- c. Were all corrective actions documented?  NA / Yes / No (explain) – Note: No corrective actions were required.

SGS Work Order Number: 1085856

d. Is there an effect on data quality/usability, according to the case narrative? NA  No / Yes

### 5. Sample Results

a. Correct analyses performed/reported as requested on COC?  Yes / No (explain)

b. All applicable holding times met?  Yes / No

c. All soils reported on a dry-weight basis?  NA / Yes / No

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?  Yes / No (explain only for non-detects with elevated PQLs)

e. Data quality or usability affected?  No / Yes (explain)

### 6. QC Samples

#### **a. Method Blank**

i. Is at least one method blank (MB) reported per matrix, analysis, and 20 samples?  Yes / No

ii. Are all method blank results less than PQL?  Yes / No

iii. If MB above PQL, what samples are affected?

iv. Do the affected sample(s) have data flags? Yes / No /  NA

If so, are the data flags clearly defined? Yes / No /  NA

v. Are data quality or usability affected?  No (i.e., MB data are acceptable) / Yes (Explain)

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

i. Organics - Is at least one LCS/LCSD reported per matrix, analysis, and 20 samples?  
NA  Yes / No

ii. Metals/Inorganics - Is at least one LCS and one sample duplicate reported per matrix, analysis and 20 samples?  NA / Yes / No

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? [AK petroleum methods %R < 20%; other analyses, refer to lab QC pages]  Yes / No (explain)

iv. Precision – Are all relative percent differences (RPDs) reported and less than method or laboratory limits, or project-specified DQOs?  Yes / No (explain)

SGS Work Order Number: 1085856

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

vi. Do the affected samples(s) have data flags?  NA /  Yes /  No (explain)

If so, are the data flags clearly defined?

vii. Is the data quality or usability affected?  No or explain.

### c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses, including field, QC and laboratory samples?  Yes /  No

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs?  Yes /  No

iii. Do the sample results with failed surrogate recoveries have data flags?  NA /  Yes /  No (explain)

If so, are the data flags clearly defined? Yes / No  NA

iv. Is the data quality or usability affected?  No or explain.

### d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)

i. Is at least one trip blank (TB) reported per matrix, analysis and cooler? NA /  Yes /  No

ii. Are all results less than the PQL? NA /  Yes /  No

iii. If TB is above the PQL, what samples are affected?  NA or list samples

iv. Is the data quality or usability affected?  No or explain.

### e. Field Duplicate

i. Was at least one field duplicate submitted per matrix, analysis and 10 project samples?  Yes /  No – Note: Project sample 1417-MW-16 was collected to verify previous sample results. A duplicate sample was collected from well MW-12 in the previous sampling event.

ii. Were the field duplicates submitted blind to the lab? Yes / No  NA

iii. Precision – Are all relative percent differences (RPDs) less than specified DQOs (recommended: 30% for water, 50% for soil) ? Yes / No  NA

iv. Is the data quality or usability affected?  No /  Yes (explain)

SGS Work Order Number: 1085856

**f. Decontamination or Equipment Blank (if applicable)**

**Not Applicable** or...

- i. Are all results less than the PQL? **Yes / No**
- ii. If results are above PQL, what samples are affected? **NA or list**
- iii. Is the data quality or usability affected? **Explain.**

**7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)**

**Not applicable** or ...

- a. Are they defined and appropriate? **Yes / No**

**Completed by:** Julie Keener

**Title:** Engineer

**Date:** January 8, 2009

**Consultant Firm:** Shannon & Wilson, Inc.

**CS Report Name:** Groundwater Investigation

**Laboratory Report Date:** November 17, 2008

**Laboratory Name:** SGS Environmental Services, Inc.

**Laboratory Report Numbers:** 1085856

**ADEC File Number:** **100.26.043**

**ADEC Hazard ID:** **22871**



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

Project: 31-1-11417-001 Mark Air  
Client: Shannon & Wilson-Fairbanks  
SGS Work Order: 1085913

Released by:

**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.



Case Narrative

Client SHANFBK Shannon & Wilson-Fairbanks  
Workorder 1085913 31-1-11417-001 Mark Air

Printed Date/Time 10/6/2008 16:49

Sample ID Client Sample ID

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

**1085913001 PS 1417-MW-10**  
8260B - ICV recovery for dichlorodifluoromethane does not meet QC goals (biased high). This analyte is estimated in the sample.  
AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
8260B - Sample result is estimated for 1,2-dibromoethane due to matrix. Result is posted overrange at 79.34 ug/L. Result was confirmed at 100X dilution at 0.76 ug/L.  
AK102 - The pattern is consistent with a weathered gasoline.

**1085913003 PS 1417-MW-12**  
AK102 - Unknown hydrocarbon with several peaks is present.

**1085913004 PS 1417-MW-21**  
AK102 - Unknown hydrocarbon with several peaks is present.

**1085913008 PS 1417-MW-16**  
AK101/8021B - Antifoam and dilution required to analyze the sample; therefore, PQLs were elevated.  
AK102 - The pattern is consistent with a weathered gasoline.

**1085913009 PS 1417-WP-3**  
AK102 - The pattern is consistent with a weathered gasoline.

**860782 CCV CCV for HBN 206715 [VMS/10139]**  
8260B - ICV recovery for dichlorodifluoromethane does not meet QC goals (biased high). This analyte may be estimated, where detected, in the associated samples.  
8260B - ICV recovery for several analytes does not meet QC goals (biased high). These analytes were not detected above the PQL in the associated samples.  
8260B - CCV recovery for methylene chloride does not meet QC goals (biased high). This analyte was not detected above the PQL in the associated samples.

**862323 LCS LCS for HBN 207068 [VXX/18828]**  
8260B - LCS recovery for trichlorofluoromethane does not meet QC goals (biased high). This analyte was not detected above the PQL in the associated samples.

**862325 CCV CCV for HBN 207069 [VMS/10173]**  
8260B - CCV recovery for trichlorofluoromethane does not meet QC goals (biased high). This analyte was not detected above the PQL in the associated samples.

**862326 MS 1085198036(862328MS)**  
8260B - MS recovery for trichlorofluoromethane does not meet QC goals. Refer to LCS for accuracy.

## Case Narrative

Client SHANFBK Shannon & Wilson-Fairbanks  
Vorkorder 1085913 31-1-11417-001 Mark Air

Printed Date/Time 10/6/2008 16:49

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Sample ID Client Sample ID

862327 MSD 1085198036(862328MSD)

8260B - MS recovery for trichlorofluoromethane and carbon disulfide does not meet QC goals. Refer to LCS for accuracy.



200 W. Potter Drive  
Anchorage, AK 99518-1605  
Tel: (907) 562-2343  
Fax: (907) 561-5301  
Web: <http://www.us.sgs.com>

Rodney Guritz  
Shannon & Wilson-Fairbanks  
2355 Hill Road  
Fairbanks, AK 99707

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**Work Order:** 1085913  
31-1-11417-001 Mark Air  
**Client:** Shannon & Wilson-Fairbanks  
**Report Date:** October 06, 2008

**Released by:**

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Enclosed are the analytical results associated with the above 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), UST-005 (CS) and AK00971 (Micro) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 9065, 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 other 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.

PQL	Practical Quantitation Limit (reporting 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.
GT	Greater Than
D	The analyte concentration is the result of a dilution.
LT	Less Than
!	Surrogate out of control limits.
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
JL	The analyte was positively identified, but the quantitation is a low estimation.
E	The analyte result is above the calibrated range.
R	Rejected

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.



SGS Ref.# 1085913001  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Client Sample ID 1417-MW-10  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
 Collected Date/Time 09/22/2008 13:05  
 Received Date/Time 09/23/2008 9:15  
 Technical Director Stephen C. Ede

Sample Remarks:

8260B - ICV recovery for dichlorodifluoromethane does not meet QC goals (biased high). This analyte is estimated in the sample.  
 AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.  
 8260B - Sample result is estimated for 1,2-dibromoethane due to matrix. Result is posted overrange at 79.34 ug/L. Result was confirmed at 100X dilution at 0.76 ug/L.  
 AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	42.9	5.00	mg/L	AK101	B		09/29/08	09/29/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	114		%	AK101	B	50-150	09/29/08	09/29/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	5.15	0.400	mg/L	AK102	G		10/02/08	10/03/08	GL
<b><u>Surrogates</u></b>									
5a Androstane <surr>	70		%	AK102	G	50-150	10/02/08	10/03/08	GL
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	3450	40.0	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
Toluene	12300	1000	ug/L	SW8260B	D		09/30/08	09/30/08	DSH
Ethylbenzene	1710	100	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
n-Butylbenzene	47.8	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon disulfide	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3,5-Trimethylbenzene	535	100	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



SGS Ref.# 1085913001  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-10  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/22/2008 13:05  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Isopropyltoluene	64.0	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
n-Propylbenzene	220	100	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
Styrene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromomethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Tetrachloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromochloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromoethane	79.3	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloroform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromomethane	ND	3.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromochloromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Vinyl chloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dichlorodifluoromethane	1.23	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
sec-Butylbenzene	24.8	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromodichloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



**SGS Ref.#** 1085913001  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** 1417-MW-10  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/22/2008 13:05  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Volatile Gas Chromatography/Mass Spectroscopy**

Methylene chloride	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
P & M -Xylene	6670	200	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
Naphthalene	568	200	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
o-Xylene	3190	100	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
Bromoform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Xylenes (total)	9860	200	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
1,2,4-Trimethylbenzene	1790	100	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
tert-Butylbenzene	6.54	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Isopropylbenzene (Cumene)	124	100	ug/L	SW8260B	E		09/30/08	09/30/08	DSH
2-Hexanone	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH

**Surrogates**

1,2-Dichloroethane-D4 <surr>	91.2		%	SW8260B	A	73-120	09/28/08	09/29/08	DSH
Toluene-d8 <surr>	89.6		%	SW8260B	A	80-120	09/28/08	09/29/08	DSH
4-Bromofluorobenzene <surr>	98.9		%	SW8260B	A	76-120	09/28/08	09/29/08	DSH



SGS Ref.# 1085913002  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-11  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 11:43  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	98.9		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	91.9		%	SW8021B	A	80-120	09/29/08	09/29/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		10/02/08	10/03/08	GL
<b><u>Surrogates</u></b>									
5a Androstane <surr>	74.9		%	AK102	D	50-150	10/02/08	10/03/08	GL



SGS Ref.# 1085913003  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-12  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 12:37  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - Unknown hydrocarbon with several peaks is present.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	0.321	0.100	mg/L	AK101	B		09/29/08	09/29/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	117		%	AK101	B	50-150	09/29/08	09/29/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	0.520	0.400	mg/L	AK102	G		10/02/08	10/03/08	GL
<b><u>Surrogates</u></b>									
5a Androstane <surr>	68		%	AK102	G	50-150	10/02/08	10/03/08	GL
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	109	4.00	ug/L	SW8260B	D		09/30/08	09/30/08	DSH
Toluene	6.57	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Ethylbenzene	15.3	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
n-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon disulfide	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloroethane	1.68	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3,5-Trimethylbenzene	6.05	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Isopropyltoluene	2.47	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



SGS Ref.# 1085913003  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-12  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 12:37  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
n-Propylbenzene	3.86	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Styrene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromomethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Tetrachloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromochloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloroform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloromethane	ND	1.00	ug/L	SW8260B	C		10/01/08	10/03/08	DSH
Bromomethane	ND	3.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromochloromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Vinyl chloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dichlorodifluoromethane	1.79	1.00	ug/L	SW8260B	C		10/01/08	10/03/08	DSH
Chloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
sec-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromodichloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methylene chloride	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
P & M -Xylene	19.2	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



**SGS Ref.#** 1085913003  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** 1417-MW-12  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/19/2008 12:37  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Naphthalene	8.04	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
o-Xylene	5.97	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromoform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Xylenes (total)	25.2	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trimethylbenzene	13.8	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Isopropylbenzene (Cumene)	4.69	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Hexanone	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
<b><u>Surrogates</u></b>									
1,2-Dichloroethane-D4 <surr>	90.7		%	SW8260B	A	73-120	09/28/08	09/29/08	DSH
1,2-Dichloroethane-D4 <surr>	109		%	SW8260B	C	73-120	10/01/08	10/03/08	DSH
Toluene-d8 <surr>	99.7		%	SW8260B	A	80-120	09/28/08	09/29/08	DSH
Toluene-d8 <surr>	100		%	SW8260B	C	80-120	10/01/08	10/03/08	DSH
4-Bromofluorobenzene <surr>	106		%	SW8260B	A	76-120	09/28/08	09/29/08	DSH
4-Bromofluorobenzene <surr>	104		%	SW8260B	C	76-120	10/01/08	10/03/08	DSH





SGS Ref.# 1085913004  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-21  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 12:49  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - Unknown hydrocarbon with several peaks is present.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	0.331	0.100	mg/L	AK101	B		09/29/08	09/29/08	HM
<b>Surrogates</b>									
4-Bromofluorobenzene <surr>	115		%	AK101	B	50-150	09/29/08	09/29/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	0.446	0.400	mg/L	AK102	G		10/02/08	10/03/08	GL
<b>Surrogates</b>									
5a Androstane <surr>	70.5		%	AK102	G	50-150	10/02/08	10/03/08	GL
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Benzene	113	4.00	ug/L	SW8260B	D		09/30/08	09/30/08	DSH
Toluene	1.25	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Ethylbenzene	14.8	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
n-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon disulfide	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloroethane	1.70	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3,5-Trimethylbenzene	4.29	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Isopropyltoluene	1.96	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



**SGS Ref.#** 1085913004  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** 1417-MW-21  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/19/2008 12:49  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
n-Propylbenzene	4.13	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Styrene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromomethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Tetrachloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromochloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloroform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloromethane	ND	1.00	ug/L	SW8260B	E		10/01/08	10/03/08	DSH
Bromomethane	ND	3.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromochloromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Vinyl chloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dichlorodifluoromethane	1.74	1.00	ug/L	SW8260B	E		10/01/08	10/03/08	DSH
Chloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
sec-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromodichloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methylene chloride	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
P & M -Xylene	16.3	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



**SGS Ref.#** 1085913004  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** 1417-MW-21  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/19/2008 12:49  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Naphthalene	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
o-Xylene	4.23	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromoform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Xylenes (total)	20.6	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trimethylbenzene	12.9	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Isopropylbenzene (Cumene)	4.47	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Hexanone	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	91.4		%	SW8260B	A	73-120	09/28/08	09/29/08	DSH
1,2-Dichloroethane-D4 <surr>	97.6		%	SW8260B	E	73-120	10/01/08	10/03/08	DSH
Toluene-d8 <surr>	100		%	SW8260B	A	80-120	09/28/08	09/29/08	DSH
Toluene-d8 <surr>	98.6		%	SW8260B	E	80-120	10/01/08	10/03/08	DSH
4-Bromofluorobenzene <surr>	112		%	SW8260B	A	76-120	09/28/08	09/29/08	DSH
4-Bromofluorobenzene <surr>	103		%	SW8260B	E	76-120	10/01/08	10/03/08	DSH



**SGS Ref.#** 1085913005  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** 1417-MW-13  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/19/2008 13:31  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Volatile Fuels Department**

Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	1.16	0.500	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	98.7		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	90.6		%	SW8021B	A	80-120	09/29/08	09/29/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	0.587	0.400	mg/L	AK102	D		10/02/08	10/03/08	GL
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**Surrogates**

5a Androstane <surr>	76.6		%	AK102	D	50-150	10/02/08	10/03/08	GL
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SGS Ref.# 1085913006  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-14  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 14:20  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	95.5		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	91.7		%	SW8021B	A	80-120	09/29/08	09/29/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		10/02/08	10/03/08	GL
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**Surrogates**

5a Androstane <surr>	71.9		%	AK102	D	50-150	10/02/08	10/03/08	GL
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SGS Ref.# 1085913007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-15  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 14:57  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
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**Volatile Fuels Department**

Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	0.775	0.500	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM

**Surrogates**

4-Bromofluorobenzene <surr>	95		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	92.5		%	SW8021B	A	80-120	09/29/08	09/29/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	ND	0.400	mg/L	AK102	D		10/02/08	10/03/08	GL
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**Surrogates**

5a Androstane <surr>	73.3		%	AK102	D	50-150	10/02/08	10/03/08	GL
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SGS Ref.# 1085913008  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID 1417-MW-16  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 15:33  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

AK101/8021B - Antifoam and dilution required to analyze the sample; therefore, PQLs were elevated.  
AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	9.94	2.00	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	4340	50.0	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	40.0	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	40.0	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	73.0	40.0	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	155	40.0	ug/L	SW8021B	A		09/29/08	09/29/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	103		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	113		%	SW8021B	A	80-120	09/29/08	09/29/08	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	3.92	0.400	mg/L	AK102	D		10/02/08	10/03/08	GL
<b><u>Surrogates</u></b>									
5a Androstane <surr>	62.1		%	AK102	D	50-150	10/02/08	10/03/08	GL



**SGS Ref.#** 1085913009  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** 1417-WP-3  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/22/2008 14:21  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

**Sample Remarks:**

AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	107		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	91.2		%	SW8021B	A	80-120	09/29/08	09/29/08	HM

**Semivolatile Organic Fuels Department**

Diesel Range Organics	4.99	0.400	mg/L	AK102	D		10/02/08	10/03/08	GL
<b><u>Surrogates</u></b>									
5a Androstane <surr>	75.2		%	AK102	D	50-150	10/02/08	10/03/08	GL





SGS Ref.# 1085913010  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Client Sample ID TRIP BLANK  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Collected Date/Time 09/19/2008 11:43  
Received Date/Time 09/23/2008 9:15  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/29/08	09/29/08	HM
Benzene	ND	0.500	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/29/08	09/29/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	101		%	AK101	A	50-150	09/29/08	09/29/08	HM
1,4-Difluorobenzene <surr>	92.6		%	SW8021B	A	80-120	09/29/08	09/29/08	HM

**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	ND	0.400	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Toluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Ethylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
n-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon disulfide	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,4-Dichlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3,5-Trimethylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chlorobenzene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Methyl-2-pentanone (MIBK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
4-Isopropyltoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
cis-1,3-Dichloropropene	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
n-Propylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



**SGS Ref.#** 1085913010  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** TRIP BLANK  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/19/2008 11:43  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
Styrene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromomethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,3-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methyl-t-butyl ether	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Tetrachloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dibromochloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichloropropane	ND	0.400	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dibromoethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Carbon tetrachloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloroform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromomethane	ND	3.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromochloromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Vinyl chloride	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Dichlorodifluoromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Chloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
sec-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromodichloromethane	ND	0.500	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Butanone (MEK)	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Methylene chloride	ND	5.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichlorofluoromethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
P & M -Xylene	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Naphthalene	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH



**SGS Ref.#** 1085913010  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Client Sample ID** TRIP BLANK  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Collected Date/Time** 09/19/2008 11:43  
**Received Date/Time** 09/23/2008 9:15  
**Technical Director** Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>									
o-Xylene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Bromoform	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Xylenes (total)	ND	2.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,4-Trimethylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
tert-Butylbenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,1-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Chlorotoluene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Trichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
trans-1,2-Dichloroethene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Hexachlorobutadiene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
Isopropylbenzene (Cumene)	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
2-Hexanone	ND	10.0	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2-Dichloropropane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1-Dichloropropene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,1,2-Trichloroethane	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,3-Dichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
1,2,3-Trichlorobenzene	ND	1.00	ug/L	SW8260B	A		09/28/08	09/29/08	DSH
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	103		%	SW8260B	A	73-120	09/28/08	09/29/08	DSH
Toluene-d8 <surr>	98.9		%	SW8260B	A	80-120	09/28/08	09/29/08	DSH
4-Bromofluorobenzene <surr>	116		%	SW8260B	A	76-120	09/28/08	09/29/08	DSH



SGS Ref.# 860367 Leaching Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18778  
Method SW5030B  
Date 09/28/2008

QC results affect the following production samples:  
1085913001, 1085913003, 1085913004, 1085913010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**TCLP Volatiles GC/MS**

1,1-Dichloroethene	ND	50.0	15.5	ug/L	09/28/08
1,2-Dichloroethane	ND	25.0	7.50	ug/L	09/28/08
1,4-Dichlorobenzene	ND	25.0	7.50	ug/L	09/28/08
2-Butanone (MEK)	ND	500	155	ug/L	09/28/08
Benzene	ND	20.0	6.00	ug/L	09/28/08
Carbon tetrachloride	ND	50.0	15.5	ug/L	09/28/08
Chlorobenzene	ND	25.0	7.50	ug/L	09/28/08
Chloroform	ND	50.0	15.0	ug/L	09/28/08
Hexachlorobutadiene	ND	50.0	15.5	ug/L	09/28/08
Tetrachloroethene	ND	50.0	15.5	ug/L	09/28/08
Trichloroethene	ND	50.0	15.5	ug/L	09/28/08
Vinyl chloride	ND	50.0	15.5	ug/L	09/28/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	100	73-120		%	09/28/08
4-Bromofluorobenzene <surr>	113	76-120		%	09/28/08
Toluene-d8 <surr>	98.4	80-120		%	09/28/08

Batch VMS10139  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 860778 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18778  
Method SW5030B  
Date 09/28/2008

QC results affect the following production samples:  
1085913001, 1085913003, 1085913004, 1085913010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 860778 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18778  
Method SW5030B  
Date 09/28/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Benzene	ND	0.400	0.120	ug/L	09/28/08
Toluene	ND	1.00	0.310	ug/L	09/28/08
Ethylbenzene	ND	1.00	0.310	ug/L	09/28/08
n-Butylbenzene	ND	1.00	0.310	ug/L	09/28/08
Carbon disulfide	ND	2.00	0.620	ug/L	09/28/08
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	09/28/08
1,2-Dichloroethane	ND	0.500	0.150	ug/L	09/28/08
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	09/28/08
4-Chlorotoluene	ND	1.00	0.310	ug/L	09/28/08
Chlorobenzene	ND	0.500	0.150	ug/L	09/28/08
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	09/28/08
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	09/28/08
4-Isopropyltoluene	ND	1.00	0.310	ug/L	09/28/08
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	09/28/08
n-Propylbenzene	ND	1.00	0.310	ug/L	09/28/08
Styrene	ND	1.00	0.310	ug/L	09/28/08
Dibromomethane	ND	1.00	0.310	ug/L	09/28/08
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	09/28/08
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	09/28/08
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	09/28/08
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	09/28/08
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	09/28/08
Tetrachloroethene	ND	1.00	0.310	ug/L	09/28/08
Dibromochloromethane	ND	0.500	0.150	ug/L	09/28/08
1,3-Dichloropropane	ND	0.400	0.120	ug/L	09/28/08
1,2-Dibromoethane	ND	1.00	0.310	ug/L	09/28/08
Carbon tetrachloride	ND	1.00	0.310	ug/L	09/28/08
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	09/28/08
Chloroform	ND	1.00	0.300	ug/L	09/28/08
Bromobenzene	ND	1.00	0.310	ug/L	09/28/08
Chloromethane	ND	1.00	0.310	ug/L	09/28/08
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	09/28/08
Bromomethane	ND	3.00	0.940	ug/L	09/28/08
Bromochloromethane	ND	1.00	0.310	ug/L	09/28/08
Vinyl chloride	ND	1.00	0.310	ug/L	09/28/08
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	09/28/08
Chloroethane	ND	1.00	0.310	ug/L	09/28/08
sec-Butylbenzene	ND	1.00	0.310	ug/L	09/28/08
Bromodichloromethane	ND	0.500	0.150	ug/L	09/28/08



SGS Ref.# 860778 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18778  
Method SW5030B  
Date 09/28/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

1,1-Dichloroethene	ND	1.00	0.310	ug/L	09/28/08
2-Butanone (MEK)	ND	10.0	3.10	ug/L	09/28/08
Methylene chloride	ND	5.00	1.00	ug/L	09/28/08
Trichlorofluoromethane	ND	1.00	0.310	ug/L	09/28/08
P & M -Xylene	ND	2.00	0.620	ug/L	09/28/08
Naphthalene	ND	2.00	0.620	ug/L	09/28/08
o-Xylene	ND	1.00	0.310	ug/L	09/28/08
Bromoform	ND	1.00	0.310	ug/L	09/28/08
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	09/28/08
tert-Butylbenzene	ND	1.00	0.310	ug/L	09/28/08
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	09/28/08
1,1-Dichloroethane	ND	1.00	0.310	ug/L	09/28/08
2-Chlorotoluene	ND	1.00	0.310	ug/L	09/28/08
Trichloroethene	ND	1.00	0.310	ug/L	09/28/08
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	09/28/08
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	09/28/08
2,2-Dichloropropane	ND	1.00	0.310	ug/L	09/28/08
Hexachlorobutadiene	ND	1.00	0.310	ug/L	09/28/08
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	09/28/08
2-Hexanone	ND	10.0	3.10	ug/L	09/28/08
1,2-Dichloropropane	ND	1.00	0.310	ug/L	09/28/08
1,1-Dichloropropene	ND	1.00	0.310	ug/L	09/28/08
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	09/28/08
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	09/28/08
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	09/28/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	99.6	73-120		%	09/28/08
Toluene-d8 <surr>	99.1	80-120		%	09/28/08
4-Bromofluorobenzene <surr>	113	76-120		%	09/28/08

Batch VMS10139  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 860897 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18783  
Method SW5030B  
Date 09/29/2008

QC results affect the following production samples:

1085913001, 1085913002, 1085913003, 1085913004, 1085913005, 1085913006, 1085913007, 1085913008, 1085913009, 1085913010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Gasoline Range Organics	ND	0.100	0.0100	mg/L	09/29/08
Benzene	ND	0.000500	0.000150	mg/L	09/29/08
Toluene	ND	0.00200	0.000620	mg/L	09/29/08
Ethylbenzene	ND	0.00200	0.000620	mg/L	09/29/08
o-Xylene	ND	0.00200	0.000620	mg/L	09/29/08
P & M -Xylene	ND	0.00200	0.000620	mg/L	09/29/08

**Surrogates**

4-Bromofluorobenzene <surr>	94.9	50-150		%	09/29/08
1,4-Difluorobenzene <surr>	88.2	80-120		%	09/29/08

Batch VFC9182  
Method AK101  
Instrument HP 5890 Series II PID+HECD VBA

Benzene	ND	0.500	0.150	ug/L	09/29/08
Toluene	ND	2.00	0.620	ug/L	09/29/08
Ethylbenzene	ND	2.00	0.620	ug/L	09/29/08
o-Xylene	ND	2.00	0.620	ug/L	09/29/08
P & M -Xylene	ND	2.00	0.620	ug/L	09/29/08

**Surrogates**

1,4-Difluorobenzene <surr>	88.2	80-120		%	09/29/08
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Batch VFC9182  
Method SW8021B  
Instrument HP 5890 Series II PID+HECD VBA





**SGS Ref.#** 860902 Method Blank  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Prep Batch** VXX18783  
**Method** SW5030B  
**Date** 09/29/2008

QC results affect the following production samples:

1085913001, 1085913002, 1085913003, 1085913004, 1085913005, 1085913006, 1085913007, 1085913008, 1085913009, 1085913010

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Fuels Department</u></b>					
Gasoline Range Organics	ND	0.100	0.0100	mg/L	09/29/08
Benzene	ND	0.000500	0.000150	mg/L	09/29/08
Toluene	ND	0.00200	0.000620	mg/L	09/29/08
Ethylbenzene	ND	0.00200	0.000620	mg/L	09/29/08
o-Xylene	ND	0.00200	0.000620	mg/L	09/29/08
P & M -Xylene	ND	0.00200	0.000620	mg/L	09/29/08
<b>Surrogates</b>					
4-Bromofluorobenzene <surr>	101	50-150		%	09/29/08
1,4-Difluorobenzene <surr>	92.4	80-120		%	09/29/08
<b>Batch</b>	VFC9182				
<b>Method</b>	AK101				
<b>Instrument</b>	HP 5890 Series II PID+HECD VBA				
Benzene	ND	0.500	0.150	ug/L	09/29/08
Toluene	ND	2.00	0.620	ug/L	09/29/08
Ethylbenzene	ND	2.00	0.620	ug/L	09/29/08
o-Xylene	ND	2.00	0.620	ug/L	09/29/08
P & M -Xylene	ND	2.00	0.620	ug/L	09/29/08
<b>Surrogates</b>					
1,4-Difluorobenzene <surr>	92.4	80-120		%	09/29/08
<b>Batch</b>	VFC9182				
<b>Method</b>	SW8021B				
<b>Instrument</b>	HP 5890 Series II PID+HECD VBA				



SGS Ref.# 861158 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18789  
Method SW5030B  
Date 09/30/2008

QC results affect the following production samples:

1085913001, 1085913003, 1085913004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>					
Benzene	ND	0.400	0.120	ug/L	09/30/08
Toluene	ND	1.00	0.310	ug/L	09/30/08
Ethylbenzene	ND	1.00	0.310	ug/L	09/30/08
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	09/30/08
n-Propylbenzene	ND	1.00	0.310	ug/L	09/30/08
P & M -Xylene	ND	2.00	0.620	ug/L	09/30/08
Naphthalene	ND	2.00	0.620	ug/L	09/30/08
o-Xylene	ND	1.00	0.310	ug/L	09/30/08
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	09/30/08
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	09/30/08
<b>Surrogates</b>					
1,2-Dichloroethane-D4 <surr>	101	73-120		%	09/30/08
Toluene-d8 <surr>	99.9	80-120		%	09/30/08
4-Bromofluorobenzene <surr>	116	76-120		%	09/30/08
Batch	VMS10145				
Method	SW8260B				
Instrument	HP 5890 Series II MS3 VNA				



SGS Ref.# 861161 Leaching Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18789  
Method SW5030B  
Date 09/30/2008

QC results affect the following production samples:  
1085913001, 1085913003, 1085913004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>TCLP Volatiles GC/MS</u></b>					
Benzene	ND	80.0	24.0	ug/L	09/30/08
<b>Surrogates</b>					
1,2-Dichloroethane-D4 <surr>	98.2	73-120		%	09/30/08
4-Bromofluorobenzene <surr>	118	76-120		%	09/30/08
Toluene-d8 <surr>	101	80-120		%	09/30/08
Batch	VMS10145				
Method	SW8260B				
Instrument	HP 5890 Series II MS3 VNA				



SGS Ref.# 861812 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch XXX20124  
Method SW3520C  
Date 10/02/2008

QC results affect the following production samples:

1085913001, 1085913002, 1085913003, 1085913004, 1085913005, 1085913006, 1085913007, 1085913008, 1085913009

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics 0.0920 J 0.400 0.0800 mg/L 10/03/08

**Surrogates**

5a Androstane <surr> 72.2 60-120 % 10/03/08

Batch XFC8244  
Method AK102  
Instrument HP 5890 Series II FID SV D R



SGS Ref.# 862322 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18828  
Method SW5030B  
Date 10/01/2008

QC results affect the following production samples:  
1085913003, 1085913004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Gas Chromatography/Mass Spectroscopy**

Chloromethane	ND	1.00	0.310	ug/L	10/03/08
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	10/03/08

**Surrogates**

1,2-Dichloroethane-D4 <surr>	101	73-120		%	10/03/08
Toluene-d8 <surr>	103	80-120		%	10/03/08
4-Bromofluorobenzene <surr>	105	76-120		%	10/03/08

Batch VMS10173  
Method SW8260B  
Instrument HP 5890 Series II MS1 VJA



**SGS Ref.#** 860779 Lab Control Sample  
 860780 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Prep Batch** VXX18778  
**Method** SW5030B  
**Date** 09/28/2008

QC results affect the following production samples:  
 1085913001, 1085913003, 1085913004, 1085913010

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
Benzene	LCS	29.4	98	( 80-120 )		30 ug/L	09/28/2008
	LCSD	28.9	96		2 (< 20)	30 ug/L	09/28/2008
Toluene	LCS	29.5	98	( 77-120 )		30 ug/L	09/28/2008
	LCSD	28.9	96		2 (< 20)	30 ug/L	09/28/2008
Ethylbenzene	LCS	31.2	104	( 80-120 )		30 ug/L	09/28/2008
	LCSD	30.6	102		2 (< 20)	30 ug/L	09/28/2008
n-Butylbenzene	LCS	30.2	101	( 80-124 )		30 ug/L	09/28/2008
	LCSD	30.7	102		1 (< 20)	30 ug/L	09/28/2008
Carbon disulfide	LCS	44.2	98	( 72-123 )		45 ug/L	09/28/2008
	LCSD	44.1	98		0 (< 20)	45 ug/L	09/28/2008
1,4-Dichlorobenzene	LCS	30.0	100	( 80-120 )		30 ug/L	09/28/2008
	LCSD	30.1	100		0 (< 20)	30 ug/L	09/28/2008
1,2-Dichloroethane	LCS	29.4	98	( 80-129 )		30 ug/L	09/28/2008
	LCSD	29.0	97		2 (< 20)	30 ug/L	09/28/2008
1,3,5-Trimethylbenzene	LCS	31.7	106	( 80-128 )		30 ug/L	09/28/2008
	LCSD	31.2	104		2 (< 20)	30 ug/L	09/28/2008
4-Chlorotoluene	LCS	32.5	108	( 79-128 )		30 ug/L	09/28/2008
	LCSD	31.7	106		2 (< 20)	30 ug/L	09/28/2008
Chlorobenzene	LCS	29.6	99	( 80-120 )		30 ug/L	09/28/2008
	LCSD	29.2	97		1 (< 20)	30 ug/L	09/28/2008
4-Methyl-2-pentanone (MIBK)	LCS	82.8	92	( 69-134 )		90 ug/L	09/28/2008
	LCSD	81.5	91		2 (< 20)	90 ug/L	09/28/2008
cis-1,2-Dichloroethene	LCS	30.4	101	( 80-125 )		30 ug/L	09/28/2008
	LCSD	30.3	101		0 (< 20)	30 ug/L	09/28/2008
4-Isopropyltoluene	LCS	31.3	104	( 80-125 )		30 ug/L	09/28/2008
	LCSD	31.3	104		0 (< 20)	30 ug/L	09/28/2008



SGS Ref.# 860779 Lab Control Sample  
 860780 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
 Prep Batch VXX18778  
 Method SW5030B  
 Date 09/28/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
cis-1,3-Dichloropropene	LCS	30.6	102	( 80-120 )		30 ug/L	09/28/2008
	LCSD	31.5	105		3 (< 20)	30 ug/L	09/28/2008
n-Propylbenzene	LCS	32.7	109	( 80-129 )		30 ug/L	09/28/2008
	LCSD	32.2	107		1 (< 20)	30 ug/L	09/28/2008
Styrene	LCS	32.5	108	( 80-120 )		30 ug/L	09/28/2008
	LCSD	32.2	107		1 (< 20)	30 ug/L	09/28/2008
Dibromomethane	LCS	28.1	94	( 80-120 )		30 ug/L	09/28/2008
	LCSD	28.0	93		0 (< 20)	30 ug/L	09/28/2008
trans-1,3-Dichloropropene	LCS	30.4	101	( 80-124 )		30 ug/L	09/28/2008
	LCSD	31.5	105		4 (< 20)	30 ug/L	09/28/2008
1,2,4-Trichlorobenzene	LCS	29.4	98	( 80-120 )		30 ug/L	09/28/2008
	LCSD	29.8	99		1 (< 20)	30 ug/L	09/28/2008
1,1,2,2-Tetrachloroethane	LCS	28.3	94	( 76-123 )		30 ug/L	09/28/2008
	LCSD	28.3	94		0 (< 20)	30 ug/L	09/28/2008
1,2-Dibromo-3-chloropropane	LCS	28.4	95	( 73-130 )		30 ug/L	09/28/2008
	LCSD	27.1	90		5 (< 20)	30 ug/L	09/28/2008
Methyl-t-butyl ether	LCS	40.3	90	( 80-120 )		45 ug/L	09/28/2008
	LCSD	40.5	90		0 (< 20)	45 ug/L	09/28/2008
Tetrachloroethene	LCS	30.3	101	( 79-122 )		30 ug/L	09/28/2008
	LCSD	29.8	99		2 (< 20)	30 ug/L	09/28/2008
Dibromochloromethane	LCS	29.6	99	( 80-120 )		30 ug/L	09/28/2008
	LCSD	30.1	100		2 (< 20)	30 ug/L	09/28/2008
1,3-Dichloropropane	LCS	28.4	95	( 80-121 )		30 ug/L	09/28/2008
	LCSD	28.1	94		1 (< 20)	30 ug/L	09/28/2008
1,2-Dibromoethane	LCS	26.4	88	( 80-120 )		30 ug/L	09/28/2008
	LCSD	24.0	80 *		10 (< 20)	30 ug/L	09/28/2008
Carbon tetrachloride	LCS	30.3	101	( 80-126 )		30 ug/L	09/28/2008
	LCSD	31.0	103		2 (< 20)	30 ug/L	09/28/2008



**SGS Ref.#** 860779 Lab Control Sample  
 860780 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Prep Batch** VXX18778  
**Method** SW5030B  
**Date** 09/28/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
1,1,1,2-Tetrachloroethane	LCS	29.9	100	( 80-120 )		30 ug/L	09/28/2008
	LCSD	29.6	99		1 (< 20)	30 ug/L	09/28/2008
Chloroform	LCS	30.8	103	( 80-124 )		30 ug/L	09/28/2008
	LCSD	30.7	102		0 (< 20)	30 ug/L	09/28/2008
Bromobenzene	LCS	30.1	100	( 80-120 )		30 ug/L	09/28/2008
	LCSD	30.6	102		2 (< 20)	30 ug/L	09/28/2008
Chloromethane	LCS	28.9	96	( 67-125 )		30 ug/L	09/28/2008
	LCSD	31.8	106		10 (< 20)	30 ug/L	09/28/2008
1,2,3-Trichloropropane	LCS	27.8	93	( 80-120 )		30 ug/L	09/28/2008
	LCSD	27.6	92		1 (< 20)	30 ug/L	09/28/2008
Bromomethane	LCS	28.6	95	( 30-140 )		30 ug/L	09/28/2008
	LCSD	34.6	115		19 (< 20)	30 ug/L	09/28/2008
Bromochloromethane	LCS	29.4	98	( 77-129 )		30 ug/L	09/28/2008
	LCSD	29.4	98		0 (< 20)	30 ug/L	09/28/2008
Vinyl chloride	LCS	30.3	101	( 72-145 )		30 ug/L	09/28/2008
	LCSD	31.5	105		4 (< 20)	30 ug/L	09/28/2008
Dichlorodifluoromethane	LCS	31.5	105	( 62-153 )		30 ug/L	09/28/2008
	LCSD	34.0	113		8 (< 20)	30 ug/L	09/28/2008
Chloroethane	LCS	28.3	94	( 67-133 )		30 ug/L	09/28/2008
	LCSD	26.6	89		6 (< 20)	30 ug/L	09/28/2008
sec-Butylbenzene	LCS	30.6	102	( 80-120 )		30 ug/L	09/28/2008
	LCSD	30.4	101		0 (< 20)	30 ug/L	09/28/2008
Bromodichloromethane	LCS	32.9	110	( 80-120 )		30 ug/L	09/28/2008
	LCSD	33.2	111		1 (< 20)	30 ug/L	09/28/2008
1,1-Dichloroethene	LCS	29.3	98	( 76-130 )		30 ug/L	09/28/2008
	LCSD	29.5	98		1 (< 20)	30 ug/L	09/28/2008
2-Butanone (MEK)	LCS	82.3	91	( 66-136 )		90 ug/L	09/28/2008





SGS Ref.# 860779 Lab Control Sample  
860780 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18778  
Method SW5030B  
Date 09/28/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
	LCS	82.2	91	0	(< 20)	90 ug/L	09/28/2008
Methylene chloride	LCS	37.7	126	( 63-131 )		30 ug/L	09/28/2008
	LCS	37.4	125	1	(< 20)	30 ug/L	09/28/2008
Trichlorofluoromethane	LCS	30.7	102	( 68-145 )		30 ug/L	09/28/2008
	LCS	30.3	101	1	(< 20)	30 ug/L	09/28/2008
P & M -Xylene	LCS	61.4	102	( 80-120 )		60 ug/L	09/28/2008
	LCS	60.4	101	2	(< 20)	60 ug/L	09/28/2008
Naphthalene	LCS	29.6	99	( 75-120 )		30 ug/L	09/28/2008
	LCS	31.2	104	5	(< 20)	30 ug/L	09/28/2008
o-Xylene	LCS	31.7	106	( 80-120 )		30 ug/L	09/28/2008
	LCS	31.5	105	1	(< 20)	30 ug/L	09/28/2008
Bromoform	LCS	29.6	99	( 80-120 )		30 ug/L	09/28/2008
	LCS	29.3	98	1	(< 20)	30 ug/L	09/28/2008
1,2,4-Trimethylbenzene	LCS	32.1	107	( 80-125 )		30 ug/L	09/28/2008
	LCS	31.6	105	2	(< 20)	30 ug/L	09/28/2008
tert-Butylbenzene	LCS	29.2	97	( 80-122 )		30 ug/L	09/28/2008
	LCS	29.5	98	1	(< 20)	30 ug/L	09/28/2008
1,1,1-Trichloroethane	LCS	31.6	105	( 80-122 )		30 ug/L	09/28/2008
	LCS	30.9	103	2	(< 20)	30 ug/L	09/28/2008
1,1-Dichloroethane	LCS	30.6	102	( 80-120 )		30 ug/L	09/28/2008
	LCS	29.8	99	3	(< 20)	30 ug/L	09/28/2008
2-Chlorotoluene	LCS	28.5	95	( 80-125 )		30 ug/L	09/28/2008
	LCS	28.6	95	0	(< 20)	30 ug/L	09/28/2008
Trichloroethene	LCS	30.4	101	( 80-125 )		30 ug/L	09/28/2008
	LCS	30.5	102	0	(< 20)	30 ug/L	09/28/2008
trans-1,2-Dichloroethene	LCS	29.7	99	( 79-132 )		30 ug/L	09/28/2008
	LCS	29.5	98	1	(< 20)	30 ug/L	09/28/2008

**SGS Ref.#** 860779 Lab Control Sample  
 860780 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Prep Batch** VXX18778  
**Method** SW5030B  
**Date** 09/28/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
1,2-Dichlorobenzene	LCS	29.2	97	( 80-120 )		30 ug/L	09/28/2008
	LCSD	29.2	97		0 (< 20)	30 ug/L	09/28/2008
2,2-Dichloropropane	LCS	33.3	111	( 80-132 )		30 ug/L	09/28/2008
	LCSD	32.9	110		1 (< 20)	30 ug/L	09/28/2008
Hexachlorobutadiene	LCS	29.0	97	( 77-125 )		30 ug/L	09/28/2008
	LCSD	28.9	96		0 (< 20)	30 ug/L	09/28/2008
Isopropylbenzene (Cumene)	LCS	32.8	109	( 80-121 )		30 ug/L	09/28/2008
	LCSD	31.7	106		3 (< 20)	30 ug/L	09/28/2008
2-Hexanone	LCS	80.6	90	( 68-130 )		90 ug/L	09/28/2008
	LCSD	79.7	89		1 (< 20)	90 ug/L	09/28/2008
1,2-Dichloropropane	LCS	30.4	101	( 80-121 )		30 ug/L	09/28/2008
	LCSD	30.3	101		0 (< 20)	30 ug/L	09/28/2008
1,1-Dichloropropene	LCS	30.2	101	( 80-122 )		30 ug/L	09/28/2008
	LCSD	29.6	99		2 (< 20)	30 ug/L	09/28/2008
1,1,2-Trichloroethane	LCS	28.9	96	( 77-120 )		30 ug/L	09/28/2008
	LCSD	28.7	96		1 (< 20)	30 ug/L	09/28/2008
1,3-Dichlorobenzene	LCS	30.0	100	( 80-120 )		30 ug/L	09/28/2008
	LCSD	29.7	99		1 (< 20)	30 ug/L	09/28/2008
1,2,3-Trichlorobenzene	LCS	29.3	98	( 77-120 )		30 ug/L	09/28/2008
	LCSD	30.1	100		3 (< 20)	30 ug/L	09/28/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS		98	( 73-120 )			09/28/2008
	LCSD		98		1		09/28/2008
Toluene-d8 <surr>	LCS		99	( 80-120 )			09/28/2008
	LCSD		100		2		09/28/2008
4-Bromofluorobenzene <surr>	LCS		98	( 76-120 )			09/28/2008
	LCSD		100		2		09/28/2008



SGS Ref.# 860779 Lab Control Sample  
860780 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18778  
Method SW5030B  
Date 09/28/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Batch VMS10139  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



**SGS Ref.#** 860898 Lab Control Sample  
 860899 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417-001 Mark Air  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 10/06/2008 16:49  
**Prep Batch** VXX18783  
**Method** SW5030B  
**Date** 09/29/2008

QC results affect the following production samples:

1085913001, 1085913002, 1085913003, 1085913004, 1085913005, 1085913006, 1085913007, 1085913008, 1085913009, 1085913010

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	0.111	111	( 80-120 )		0.100 mg/L	09/29/2008
	LCSD	0.108	108		3	(< 20 )	0.100 mg/L 09/29/2008
Toluene	LCS	0.108	108	( 80-120 )		0.100 mg/L	09/29/2008
	LCSD	0.107	107		1	(< 20 )	0.100 mg/L 09/29/2008
Ethylbenzene	LCS	0.110	110	( 87-125 )		0.100 mg/L	09/29/2008
	LCSD	0.107	107		3	(< 20 )	0.100 mg/L 09/29/2008
o-Xylene	LCS	0.106	106	( 85-120 )		0.100 mg/L	09/29/2008
	LCSD	0.104	104		2	(< 20 )	0.100 mg/L 09/29/2008
P & M -Xylene	LCS	0.219	109	( 87-125 )		0.200 mg/L	09/29/2008
	LCSD	0.214	107		2	(< 20 )	0.200 mg/L 09/29/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		95	( 80-120 )			09/29/2008
	LCSD						

**Batch** VFC9182  
**Method** AK101  
**Instrument** HP 5890 Series II PID+HECD VBA



SGS Ref.# 860898 Lab Control Sample  
 860899 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-I-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
 Prep Batch VXX18783  
 Method SW5030B  
 Date 09/29/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	111	111	( 80-120 )		100 ug/L	09/29/2008
	LCSD	108	108		3	(< 20 )	100 ug/L 09/29/2008
Toluene	LCS	108	108	( 80-120 )		100 ug/L	09/29/2008
	LCSD	107	107		1	(< 20 )	100 ug/L 09/29/2008
Ethylbenzene	LCS	110	110	( 87-125 )		100 ug/L	09/29/2008
	LCSD	107	107		3	(< 20 )	100 ug/L 09/29/2008
o-Xylene	LCS	106	106	( 85-120 )		100 ug/L	09/29/2008
	LCSD	104	104		2	(< 20 )	100 ug/L 09/29/2008
P & M -Xylene	LCS	219	109	( 87-125 )		200 ug/L	09/29/2008
	LCSD	214	107		2	(< 20 )	200 ug/L 09/29/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		95	( 80-120 )			09/29/2008
	LCSD						

Batch VFC9182  
 Method SW8021B  
 Instrument HP 5890 Series II PID+HECD VBA



SGS Ref.# 860900 Lab Control Sample  
860901 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18783  
Method SW5030B  
Date 09/29/2008

QC results affect the following production samples:

1085913001, 1085913002, 1085913003, 1085913004, 1085913005, 1085913006, 1085913007, 1085913008, 1085913009, 1085913010

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	0.200	100	( 60-120 )		0.200 mg/L	09/29/2008
	LCSD	0.200	100		0 (< 20)	0.200 mg/L	09/29/2008
<b>Surrogates</b>							
4-Bromofluorobenzene <surr>	LCS		98	( 50-150 )			09/29/2008
	LCSD		93		5		09/29/2008

Batch VFC9182  
Method AK101  
Instrument HP 5890 Series II PID+HECD VBA



SGS Ref.# 861159 Lab Control Sample  
861160 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18789  
Method SW5030B  
Date 09/30/2008

QC results affect the following production samples:  
1085913001, 1085913003, 1085913004

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 861159 Lab Control Sample  
 861160 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417-001 Mark Air  
 Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
 Prep Batch VXX18789  
 Method SW5030B  
 Date 09/30/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Gas Chromatography/Mass Spectroscopy</u></b>							
Benzene	LCS	29.5	98	( 80-120 )		30 ug/L	09/30/2008
	LCSD	29.2	98		1 (< 20)	30 ug/L	09/30/2008
Toluene	LCS	29.2	97	( 77-120 )		30 ug/L	09/30/2008
	LCSD	29.5	98		1 (< 20)	30 ug/L	09/30/2008
Ethylbenzene	LCS	30.9	103	( 80-120 )		30 ug/L	09/30/2008
	LCSD	31.2	104		1 (< 20)	30 ug/L	09/30/2008
1,3,5-Trimethylbenzene	LCS	30.6	102	( 80-128 )		30 ug/L	09/30/2008
	LCSD	31.5	105		3 (< 20)	30 ug/L	09/30/2008
n-Propylbenzene	LCS	31.8	106	( 80-129 )		30 ug/L	09/30/2008
	LCSD	32.9	110		3 (< 20)	30 ug/L	09/30/2008
P & M -Xylene	LCS	61.6	103	( 80-120 )		60 ug/L	09/30/2008
	LCSD	62.1	104		1 (< 20)	60 ug/L	09/30/2008
Naphthalene	LCS	28.4	95	( 75-120 )		30 ug/L	09/30/2008
	LCSD	29.6	99		4 (< 20)	30 ug/L	09/30/2008
o-Xylene	LCS	31.6	105	( 80-120 )		30 ug/L	09/30/2008
	LCSD	31.9	106		1 (< 20)	30 ug/L	09/30/2008
1,2,4-Trimethylbenzene	LCS	30.9	103	( 80-125 )		30 ug/L	09/30/2008
	LCSD	31.9	106		3 (< 20)	30 ug/L	09/30/2008
Isopropylbenzene (Cumene)	LCS	31.8	106	( 80-121 )		30 ug/L	09/30/2008
	LCSD	32.1	107		1 (< 20)	30 ug/L	09/30/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS		99	( 73-120 )			09/30/2008
	LCSD		98		1		09/30/2008
Toluene-d8 <surr>	LCS		99	( 80-120 )			09/30/2008
	LCSD		100		1		09/30/2008
4-Bromofluorobenzene <surr>	LCS		100	( 76-120 )			09/30/2008
	LCSD		100		1		09/30/2008





SGS Ref.# 861159 Lab Control Sample  
861160 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18789  
Method SW5030B  
Date 09/30/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Batch VMS10145  
Method SW8260B  
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 861813 Lab Control Sample  
861814 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch XXX20124  
Method SW3520C  
Date 10/02/2008

QC results affect the following production samples:

1085913001, 1085913002, 1085913003, 1085913004, 1085913005, 1085913006, 1085913007, 1085913008, 1085913009

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Semivolatile Organic Fuels Department</b>							
Diesel Range Organics	LCS 16.7	84	( 75-125 )			20 mg/L	10/03/2008
	LCSD						
<b>Surrogates</b>							
5a Androstane <surr>	LCS	84	( 60-120 )				10/03/2008
	LCSD	82		3			10/03/2008

Batch XFC8244  
Method AK102  
Instrument HP 5890 Series II FID SV D R



SGS Ref.# 862323 Lab Control Sample  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417-001 Mark Air  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18828  
Method SW5030B  
Date 10/01/2008

QC results affect the following production samples:  
1085913003, 1085913004

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>							
Chloromethane	LCS	26.1	87	( 67-125 )		30 ug/L	10/03/2008
Dichlorodifluoromethane	LCS	25.2	84	( 62-153 )		30 ug/L	10/03/2008
<b>Surrogates</b>							
1,2-Dichloroethane-D4 <surr>	LCS		99	( 73-120 )			10/03/2008
Toluene-d8 <surr>	LCS		100	( 80-120 )			10/03/2008
4-Bromofluorobenzene <surr>	LCS		93	( 76-120 )			10/03/2008

Batch VMS10173  
Method SW8260B  
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 862326 Matrix Spike  
862327 Matrix Spike Duplicate

Printed Date/Time 10/06/2008 16:49  
Prep Batch VXX18828  
Method Volatiles Extraction 8240/8260  
Date 10/01/2008

Original 862328  
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:  
1085913003, 1085913004

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Chloromethane	MS	ND	26.9	90	(67-125)			30.0	ug/L 10/03/2008
	MSD		28.5	95		6	(< 20)	30.0	ug/L 10/03/2008
Dichlorodifluoromethane	MS	ND	26.3	88	(62-153)			30.0	ug/L 10/03/2008
	MSD		26.5	88		1	(< 20)	30.0	ug/L 10/03/2008
<b>Surrogates</b>									
1,2-Dichloroethane-D4 <surr>	MS		29.7	99	(73-120)				10/03/2008
	MSD		31.3	104		5			10/03/2008
Toluene-d8 <surr>	MS		29.5	98	(80-120)				10/03/2008
	MSD		29.6	99		0			10/03/2008
4-Bromofluorobenzene <surr>	MS		28.6	95	(76-120)				10/03/2008
	MSD		28.7	96		0			10/03/2008

Batch VMS10173  
Method SW8260B  
Instrument HP 5890 Series II MS1 VJA



1085913



# CHAIN OF CUSTODY RECORD

## IGS Environmental Services Inc.

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

www.us.sgs.com

086634

1 CLIENT: Shannon & Wilson  
 CONTACT: Rodney  
 PROJECT: Mark Air  
 REPORTS TO: Julie  
 INVOICE TO: S&W

PHONE NO: (907) 479-0600  
 SITE/PWSID#: 31-11417-001  
 E-MAIL: jak@sharwil.com  
 FAX NO.: ( )  
 QUOTE #  
 P.O. NUMBER

SGS Reference: \_\_\_\_\_ PAGE 1 OF 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	CONTAINERS				REMARKS
					No	C= COMP	G= GRAB	Analysis Required	
1	1417-MW-10	9/24/08	13:05	GW	5	G	X	X	
2	1417-MW-11	9/19/08	11:43	↓	5	G	X	X	
3	1417-MW-12	9/19/08	12:37	↓	8	G	X	X	
4	1417-MW-21	↓	12:49	↓	8	G	X	X	
5	1417-MW-13	↓	13:31	↓	5	G	X	X	
6	1417-MW-14	↓	14:20	↓	5	G	X	X	
7	1417-MW-15	↓	14:57	↓	5	G	X	X	
8	1417-MW-16	↓	15:33	↓	5	G	X	X	
9	1417-WP-3	9/22/08	14:21	↓	5	G	X	X	
10	A-C								

4

Collected/Relinquished By: (1) Rodney Jaxby 9/22/08 14:55  
 Relinquished By: (2) [Signature] 9/22/08 16:30  
 Relinquished By: (3) [Signature] 9/22/08 16:30  
 Relinquished By: (4) [Signature] 9/22/08 16:30

Shipping Carrier: Samples Received Cold? (Circle) YES NO  
 Temperature (C): 5.7 TB = 1.7

Shipping Ticket No: Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Deliverable Requirements: Special Instructions: Requested Turnaround Time:  RUSH  STD



SGS WO#:

1085913

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: 9.23.08 0915  
Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No   
Number of Hours From Alaska Local Time:         
Foreign Soil? Yes \_\_\_\_\_ No

Delivery method to Anchorage (circle all that apply):  
Alert Courier / UPS / FedEx / USPS / AA Goldstreak / NAC / ERA / PenAir / Carlisle Lynden / SGS  
Other: \_\_\_\_\_  
Airbill # \_\_\_\_\_

COOLER AND TEMP BLANK READINGS\* 700

Cooler ID	Temp Blank (°C)	Cooler (°C)	Cooler ID	Temp Blank (°C)	Cooler (°C)
<u>1</u>	<u>1.4</u>	<u>2.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CUSTODY SEALS INTACT:  YES  NO  
# / WHERE: 2 FRONT & BACK TOP UN

COMPLETED BY: [Signature]

\*Temperature readings include thermometer correction factors.



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? Yes

If this is for PWS, provide PWSID: \_\_\_\_\_

Will courier charges apply?

Method of payment? \_\_\_\_\_

Data package required? (Level: 1 / 2 / 3 / 4)

Notes: \_\_\_\_\_

Is this a DoD project? (USACE, Navy, AFCEE)

TAT (circle one): Standard -or- Rush

Received Date: 9/22/08

Received Time: 1455

Is date/time conversion necessary? NO

# of hours to AK Local Time: NA

Thermometer ID: FWX710

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>1.7 °C</u>	<u>5.7 °C</u>
_____	_____ °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 / Carliele / 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 out for DoD projects (USACE, Navy, AFCEE)***

Yes	No		Samples/Analyses Affected:
<input type="checkbox"/>	<input type="checkbox"/>	Is received temperature $4 \pm 2^\circ\text{C}$ ?	_____
_____	_____	Exceptions: _____	_____
_____	_____	If temperature(s) $< 0^\circ\text{C}$ , were containers ice-free? <u>N/A</u>	_____
_____	_____	<i>Notify PM immediately of any ice in samples</i>	_____
_____	_____	Was there an airbill? (Note # above in the right hand column)	_____
_____	_____	Was cooler sealed with custody seals?	_____
_____	_____	# / where: _____	_____
_____	_____	Were seal(s) intact upon arrival?	_____
_____	_____	Was there a COC with cooler?	_____
_____	_____	Was COC sealed in plastic bag & taped inside lid of cooler?	_____
_____	_____	Was the COC filled out properly?	_____
_____	_____	Did the COC indicate USACE / Navy / AFCEE project?	_____
_____	_____	Did the COC and samples correspond?	_____
_____	_____	Were all sample packed to prevent breakage?	_____
_____	_____	Packing material: _____	_____
_____	_____	Were all samples unbroken and clearly labeled?	_____
_____	_____	Were all samples sealed in separate plastic bags?	_____
_____	_____	Were all VOCs free of headspace and/or MeOH preserved?	_____
_____	_____	Were correct container / sample sizes submitted?	_____
_____	_____	Is sample condition good?	_____
_____	_____	Was copy of CoC, SRF, and custody seals given to PM to fax?	_____

***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: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Completed by (sign) Carmen Beene (print): CARMEN BEENE

Login proof (check one): waived \_\_\_\_\_ required  performed by: [Signature]





**SGS** Environmental

*Carmon Beene*

**CUSTODY SEAL** ~~W08~~ 59129A13 15914

Signature: \_\_\_\_\_

Date/Time: \_\_\_\_\_

9/22/08 1645

**SGS** Environmental

*Carmon Beene*

**CUSTODY SEAL**

W08#59129A13  
5914

Signature: \_\_\_\_\_

Date/Time: \_\_\_\_\_

9/22/08 1645

## LABORATORY DATA REVIEW CHECKLIST

(NOTE: NA = not applicable)

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?  Yes / No
- 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 /  NA

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?  Yes / No
- b. Were the correct analyses requested?  Yes / No

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?  Yes / No
- b. Sample preservation acceptable - acidified waters, MeOH-preserved VOC soil (GRO, BTEX, VOCs, etc.)?  Yes / No
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)?  NA / Yes / No
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)?  NA / Yes / No
- e. Data quality or usability affected? Yes (explain)  No

### 4. Case Narrative

- a. Present and understandable?  Yes / No (explain)
- b. Discrepancies, errors or QC failures noted by the lab? NA  Yes / No (explain)
- c. Were all corrective actions documented?  NA / Yes / No (explain) – Note: No corrective actions were required.

SGS Work Order Number: 1085913

d. Is there an effect on data quality/usability, according to the case narrative? NA / No / **Yes** (explain) – Note: the case narrative indicates the initial calibration verification analysis for dichlorodifluoromethane was biased high, and this analyte may be estimated, where detected in associated samples. This analyte was detected in samples from wells MW-10 and MW-12.

## 5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No (explain)
- b. All applicable holding times met? **Yes** / No
- c. All soils reported on a dry-weight basis? **NA** / Yes / No
- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / No (explain only for non-detects with elevated PQLs)
- e. Data quality or usability affected? **No** / Yes (explain)

## 6. QC Samples

### a. Method Blank

- i. Is at least one method blank (MB) reported per matrix, analysis, and 20 samples? **Yes** / No
- ii. Are all method blank results less than PQL? **Yes** / No
- iii. If MB above PQL, what samples are affected?
- iv. Do the affected sample(s) have data flags? Yes / No / **NA**
- If so, are the data flags clearly defined? Yes / No / **NA**

v. Are data quality or usability affected? **No** (i.e., MB data are acceptable) / Yes (Explain)

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

- i. Organics - Is at least one LCS/LCSD reported per matrix, analysis, and 20 samples?  
NA **Yes** / No
- ii. Metals/Inorganics - Is at least one LCS and one sample duplicate reported per matrix, analysis and 20 samples? NA **Yes** / No
- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DOOs? [AK petroleum methods %R < 20%; other analyses, refer to lab QC pages] Yes **No** (explain) – Note: the LCS recovery for dichlorodifluoromethane

SGS Work Order Number: 1085913

**was above the laboratory's limit, and this analyte may be biased high in associated samples. This analyte was detected in samples from wells MW-10 and MW-12.**

iv. Precision – Are all relative percent differences (RPDs) reported and less than method or laboratory limits, or project-specified DQOs?  Yes / No (explain)

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

vi. Do the affected samples(s) have data flags?  NA / Yes / No (explain)

If so, are the data flags clearly defined?

vii. Is the data quality or usability affected?  No or explain.

**c. Surrogates - Organics Only**

i. Are surrogate recoveries reported for organic analyses, including field, QC and laboratory samples?  Yes / No

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs?  Yes / No

iii. Do the sample results with failed surrogate recoveries have data flags?  NA / Yes / No (explain)

If so, are the data flags clearly defined? Yes / No  NA

iv. Is the data quality or usability affected?  No or explain.

**d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)**

i. Is at least one trip blank (TB) reported per matrix, analysis and cooler? NA /  Yes / No

ii. Are all results less than the PQL? NA /  Yes / No

iii. If TB is above the PQL, what samples are affected?  NA or list samples

iv. Is the data quality or usability affected?  No or explain.

**e. Field Duplicate**

i. Was at least one field duplicate submitted per matrix, analysis and 10 project samples?  Yes / No – Note: duplicate samples were collected from well MW-12.

ii. Were the field duplicates submitted blind to the lab?  Yes / No / NA

SGS Work Order Number: 1085913

iii. Precision – Are all relative percent differences (RPDs) less than specified DQOs (recommended: 30% for water, 50% for soil)? Yes / No / NA

iv. Is the data quality or usability affected? No / Yes (explain)

**f. Decontamination or Equipment Blank (if applicable)**

Not Applicable or ...

i. Are all results less than the PQL? Yes / No

ii. If results are above PQL, what samples are affected? NA or list

iii. Is the data quality or usability affected? Explain.

**7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)**

Not applicable or ...

a. Are they defined and appropriate? Yes / No

**Completed by:** Jon Lindstrom, Ph.D.

**Title:** Chemist

**Date:** November 5, 2008

**Consultant Firm:** Shannon & Wilson, Inc.

**CS Report Name:** Groundwater Investigation

**Laboratory Report Date:** October 6, 2008

**Laboratory Name:** SGS Environmental Services, Inc.

**Laboratory Report Numbers:** 1085913

**ADEC File Number:** 100.26.043

**ADEC Hazard ID:** 22871



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

Project: 31-1-11417 Mark Air  
Client: Shannon & Wilson-Fairbanks  
SGS Work Order: 1085951

Released by:

**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.



Case Narrative

Client SHANFBK Shannon & Wilson-Fairbanks  
Workorder 1085951 31-1-11417 Mark Air

Printed Date/Time 10/16/2008 10:36

Sample ID Client Sample ID

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

---

1085951001 PS 1417-A3

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.

200 W. Potter Drive  
Anchorage, AK 99518-1605  
Tel: (907) 562-2343  
Fax: (907) 561-5301  
Web: <http://www.us.sgs.com>

Julie Keener  
Shannon & Wilson-Fairbanks  
2355 Hill Rd  
Fairbanks, AK 99709

**Work Order:** 1085951  
31-1-11417 Mark Air  
**Client:** Shannon & Wilson-Fairbanks  
**Report Date:** October 16, 2008

**Released by:**

Enclosed are the analytical results associated with the above 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), UST-005 (CS) and AK00971 (Micro) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 9065, 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 other 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.

PQL	Practical Quantitation Limit (reporting 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.
GT	Greater Than
D	The analyte concentration is the result of a dilution.
LT	Less Than
!	Surrogate out of control limits.
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
JL	The analyte was positively identified, but the quantitation is a low estimation.
E	The analyte result is above the calibrated range.
R	Rejected

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.





**SGS Ref.#** 1085951001  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11417 Mark Air  
**Client Sample ID** 1417-A3  
**Matrix** Soil/Solid (dry weight)

**Printed Date/Time** 10/16/2008 10:37  
**Collected Date/Time** 10/03/2008 15:15  
**Received Date/Time** 10/04/2008 10:20  
**Technical Director** Stephen C. Ede

**Sample Remarks:**

AK101/8021B - BFB (surrogate) recovery does not meet QC goals (biased high) due to hydrocarbon interference.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	16.4	6.33	mg/Kg	AK101	A		10/03/08	10/07/08	HM
Benzene	0.190	0.0316	mg/Kg	SW8021B	A		10/03/08	10/07/08	HM
Toluene	0.630	0.127	mg/Kg	SW8021B	A		10/03/08	10/07/08	HM
Ethylbenzene	0.623	0.127	mg/Kg	SW8021B	A		10/03/08	10/07/08	HM
o-Xylene	0.817	0.127	mg/Kg	SW8021B	A		10/03/08	10/07/08	HM
P & M -Xylene	2.05	0.127	mg/Kg	SW8021B	A		10/03/08	10/07/08	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	158	!	%	AK101	A	50-150	10/03/08	10/07/08	HM
1,4-Difluorobenzene <surr>	90.7		%	SW8021B	A	80-120	10/03/08	10/07/08	HM
<b><u>Solids</u></b>									
Total Solids	80.6		%	SM20 2540G	B			10/14/08	STB



SGS Ref.# 863304 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/16/2008 10:37  
Prep Batch VXX18855  
Method SW5035A  
Date 10/07/2008

QC results affect the following production samples:  
1085951001

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
-----------	---------	-------------------------	-----	-------	---------------

**Volatile Fuels Department**

Gasoline Range Organics	ND	2.50	0.500	mg/Kg	10/07/08
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**Surrogates**

4-Bromofluorobenzene <surr>	101	50-150		%	10/07/08
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Batch VFC9202

Method AK101

Instrument HP 5890 Series II PID+FID VCA

Benzene	ND	0.0125	0.00400	mg/Kg	10/07/08
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Toluene	ND	0.0500	0.0150	mg/Kg	10/07/08
---------	----	--------	--------	-------	----------

Ethylbenzene	ND	0.0500	0.0150	mg/Kg	10/07/08
--------------	----	--------	--------	-------	----------

o-Xylene	ND	0.0500	0.0150	mg/Kg	10/07/08
----------	----	--------	--------	-------	----------

P & M -Xylene	ND	0.0500	0.0150	mg/Kg	10/07/08
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**Surrogates**

1,4-Difluorobenzene <surr>	93.1	80-120		%	10/07/08
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Batch VFC9202

Method SW8021B

Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 864492 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/16/2008 10:37  
Prep Batch  
Method  
Date

QC results affect the following production samples:  
1085951001

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
-----------	---------	-------------------------	-----	-------	---------------

**Solids**

Total Solids	100			%	10/14/08
Batch	SPT7836				
Method	SM20 2540G				
Instrument					



SGS Ref.# 864493 Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417 Mark Air  
Original 1085942003  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/16/2008 10:37  
Prep Batch  
Method  
Date

QC results affect the following production samples:

1085951001

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

**Solids**

Total Solids	88.5	89.0	%	1	(< 15)	10/14/2008
--------------	------	------	---	---	--------	------------

Batch SPT7836  
Method SM20 2540G  
Instrument



SGS Ref.# 863305 Lab Control Sample  
 863306 Lab Control Sample Duplicate  
 Client Name Shannon & Wilson-Fairbanks  
 Project Name/# 31-1-11417 Mark Air  
 Matrix Soil/Solid (dry weight)

Printed Date/Time 10/16/2008 10:37  
 Prep Batch VXX18855  
 Method SW5035A  
 Date 10/07/2008

QC results affect the following production samples:  
 1085951001

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	1.30	104	( 80-125 )		1.25 mg/Kg	10/07/2008
	LCSD	1.29	103		1	(< 20 )	1.25 mg/Kg 10/07/2008
Toluene	LCS	1.31	105	( 85-120 )		1.25 mg/Kg	10/07/2008
	LCSD	1.32	105		0	(< 20 )	1.25 mg/Kg 10/07/2008
Ethylbenzene	LCS	1.35	108	( 85-125 )		1.25 mg/Kg	10/07/2008
	LCSD	1.35	108		0	(< 20 )	1.25 mg/Kg 10/07/2008
o-Xylene	LCS	1.30	104	( 85-125 )		1.25 mg/Kg	10/07/2008
	LCSD	1.30	104		0	(< 20 )	1.25 mg/Kg 10/07/2008
P & M -Xylene	LCS	2.79	111	( 85-125 )		2.50 mg/Kg	10/07/2008
	LCSD	2.79	112		0	(< 20 )	2.50 mg/Kg 10/07/2008
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		98	( 80-120 )			10/07/2008
	LCSD		98		1		10/07/2008

Batch VFC9202  
 Method SW8021B  
 Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 863307 Lab Control Sample  
863308 Lab Control Sample Duplicate  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11417 Mark Air  
Matrix Soil/Solid (dry weight)

Printed Date/Time 10/16/2008 10:37  
Prep Batch VXX18855  
Method SW5035A  
Date 10/07/2008

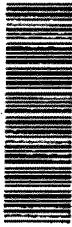
QC results affect the following production samples:  
1085951001

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Gasoline Range Organics	LCS	10.6	94	( 60-120 )		11.3 mg/Kg	10/07/2008
	LCSD	10.7	95		1 (< 20)	11.3 mg/Kg	10/07/2008
<b>Surrogates</b>							
4-Bromofluorobenzene <surrogate>	LCS		101	( 50-150 )			10/07/2008
	LCSD		101		0		10/07/2008

Batch VFC9202  
Method AK101  
Instrument HP 5890 Series II PID+FID VCA

# SGS

## 1085951



### HAIN OF CUSTODY RECORD Environmental Services Inc.

- Locations Nationwide
- Alaska
  - Hawaii
  - Ohio
  - Maryland
  - New Jersey
  - North Carolina
  - West Virginia
- www.us.sgs.com

# 080205

<b>1</b> CLIENT: Shannon & Wilson CONTACT: Julie Keener PROJECT: Mark Arr REPORTS TO: INVOICE TO:		PHONE NO: (907) 479-0600 SITE/PWSID#: 31-1-11417- E-MAIL: jak@sharwil.com FAX NO.: ( )		QUOTE # P.O. NUMBER	
<b>2</b> LAB NO. SAMPLE IDENTIFICATION DATE TIME MATRIX OAPB 1417-A3 10/3/08 15:15 GW		No CONTAINERS SAMPLE TYPE C= COMP G= GRAB		Preservatives Used: MeOH Analysis Required: (3) G/OTEX	
<b>5</b> Collected/Relinquished By: (1) Rodney [Signature] Relinquished By: (2) [Signature] Relinquished By: (3) [Signature] Relinquished By: (4) [Signature]		Date Time 10/3/08 15:40 10/03/08 16:30 [Signature]		Shipping Carrier: [Signature] Shipping Ticket No: Special Deliverable Requirements: Special Instructions:	
Samples Received Cold? (Circle) YES NO Temperature: 5.8 Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT		No CONTAINERS SAMPLE TYPE C= COMP G= GRAB		Preservatives Used: MeOH Analysis Required: (3) G/OTEX	
Requested Turnaround Time: <input type="checkbox"/> RUSH <input checked="" type="checkbox"/> STD		Date Needed		Requested Turnaround Time:	



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: 10/03/08  
 Received Time: 1540  
 Is date/time conversion necessary? NO  
 # of hours to AK Local Time: NA  
 Thermometer ID: F1313

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>1.7 °C</u>	<u>5.0 °C</u>
_____	_____ °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 / Carlisle/  
 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 out for DoD projects (USACE, Navy, AFCEE)

Yes	No		Samples/Analyses Affected:
_____	_____	Is received temperature $4 \pm 2^\circ\text{C}$ ?	_____
_____	_____	Exceptions: _____	_____
_____	_____	If temperature(s) $< 0^\circ\text{C}$ were containers ice-free? <u>N/A</u>	_____
_____	_____	<i>Notify PM immediately of any ice in samples</i>	_____
_____	_____	Was there an airbill? <i>(Note # above in the right hand column)</i>	_____
_____	_____	Was cooler sealed with custody seals?	_____
_____	_____	# / where: _____	_____
_____	_____	Were seal(s) intact upon arrival?	_____
_____	_____	Was there a COC with cooler?	_____
_____	_____	Was COC sealed in plastic bag & taped inside lid of cooler?	_____
_____	_____	Was the COC filled out properly?	_____
_____	_____	Did the COC indicate USACE / Navy / AFCEE project?	_____
_____	_____	Did the COC and samples correspond?	_____
_____	_____	Were all sample packed to prevent breakage?	_____
_____	_____	Packing material: _____	_____
_____	_____	Were all samples unbroken and clearly labeled?	_____
_____	_____	Were all samples sealed in separate plastic bags?	_____
_____	_____	Were all VOCs free of headspace and/or MeOH preserved?	_____
_____	_____	Were correct container / sample sizes submitted?	_____
_____	_____	Is sample condition good?	_____
_____	_____	Was copy of COC, SRF, and custody seals given to PM to fax?	_____

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: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Completed by (sign): Cameron Beente  
 Login proof (check one): waived \_\_\_\_\_ required

(print): CAMERON BEENTE  
 performed by: [Signature]





1085951

SGS WO#:



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: 10/4/08 1020  
Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No   
Number of Hours From Alaska Local Time: NA  
Foreign Soil? Yes \_\_\_\_\_ No

Delivery method to Anchorage (circle all that apply):

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

Other: \_\_\_\_\_

Airbill # \_\_\_\_\_

#69D

COOLER AND TEMP BLANK READINGS\*

Cooler ID	Temp Blank (°C)	Cooler (°C)	Cooler ID	Temp Blank (°C)	Cooler (°C)
<u>1</u>	<u>1.7</u>	<u>1.2</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CUSTODY SEALS INTACT:  YES  NO  
# / WHERE: 2 / 1 on front, 1 on back

COMPLETED BY: Amie Collins

\*Temperature readings include thermometer correction factors.



**SGS** Environmental

CUSTODY SEAL

W# 5948 15947 15950  
5951

Signature:

*Carmen Beene*

Date/Time:

10/03/08 11:45

**SGS** Environmental

CUSTODY SEAL

W# 5950

Signature:

*Carmen Beene*

Date/Time:

10/03/08 10:45

**SGS** Environmental

CUSTODY SEAL

W# 5950

Signature:

*Carmen Beene*

Date/Time:

10/03/08 10:45

**SGS** Environmental

CUSTODY SEAL

W# 5950

*Carmen Beene*

Date/Time:

10/03/08 10:45

1085951



**SGS** Environmental

CUSTODY SEAL

W0#5950

Signature: Camm Beene

Signature:

Date/Time:

10/03/08 1645

**SGS**

Environmental

CUSTODY SEAL

W0#5950

Signature: Camm Beene

Signature:

Date/Time:

10/03/08 1645

**SGS**

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CUSTODY SEAL

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10/03/08 1645

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CUSTODY SEAL

W0#5950

Signature: Camm Beene

Signature:

Date/Time:

10/03/08 1645

**SGS**

Environmental

CUSTODY SEAL

W0#5950

Signature: Camm Beene

Signature:

Date/Time:

10/03/08 1645

Environmental

**SGS**

CUSTODY SEAL

W0#5948, 5947, 5950  
5951  
Date/Time: 10/03/08 1645

Signature: Camm Beene

Signature:



1085951



## LABORATORY DATA REVIEW CHECKLIST

(NOTE: NA = not applicable)

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?  Yes / No
- 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 /  NA

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?  Yes / No
- b. Were the correct analyses requested?  Yes / No

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?  Yes / No
- b. Sample preservation acceptable - acidified waters, MeOH-preserved VOC soil (GRO, BTEX, VOCs, etc.)?  Yes / No
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)?  NA / Yes / No
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)?  NA / Yes / No
- e. Data quality or usability affected? Yes (explain) /  No

### 4. Case Narrative

- a. Present and understandable?  Yes / No (explain)
- b. Discrepancies, errors or QC failures noted by the lab? NA /  Yes / No (explain)
- c. Were all corrective actions documented?  NA / Yes / No (explain) – Note: No corrective actions were required.

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d. Is there an effect on data quality/usability, according to the case narrative? NA  No  Yes (explain)

### 5. Sample Results

a. Correct analyses performed/reported as requested on COC?  Yes  No (explain)

b. All applicable holding times met?  Yes  No

c. All soils reported on a dry-weight basis? NA  Yes  No

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?  Yes  No (explain only for non-detects with elevated PQLs)

e. Data quality or usability affected?  No  Yes (explain)

### 6. QC Samples

#### **a. Method Blank**

i. Is at least one method blank (MB) reported per matrix, analysis, and 20 samples?  Yes  No

ii. Are all method blank results less than PQL?  Yes  No

iii. If MB above PQL, what samples are affected?

iv. Do the affected sample(s) have data flags? Yes / No  NA

If so, are the data flags clearly defined? Yes / No  NA

v. Are data quality or usability affected?  No (i.e., MB data are acceptable) / Yes (Explain)

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

i. Organics - Is at least one LCS/LCSD reported per matrix, analysis, and 20 samples?

NA  Yes  No

ii. Metals/Inorganics - Is at least one LCS and one sample duplicate reported per matrix, analysis and 20 samples?  NA  Yes  No

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? [AK petroleum methods %R < 20%; other analyses, refer to lab QC pages]  Yes  No (explain)

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- iv. Precision – Are all relative percent differences (RPDs) reported and less than method or laboratory limits, or project-specified DQOs?  Yes / No (explain)
- v. If %R or RPD is outside of acceptable limits, what samples are affected?  NA or list
- vi. Do the affected samples(s) have data flags?  NA / Yes / No (explain)

If so, are the data flags clearly defined?

- vii. Is the data quality or usability affected?  No or explain.

**c. Surrogates - Organics Only**

- i. Are surrogate recoveries reported for organic analyses, including field, QC and laboratory samples?  Yes / No
- ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? Yes  No **Note: Recovery of the GRO surrogate 4-bromo-fluorobenzene was above the laboratory control limit for samples 1417-A3 due to hydrocarbon interference.**
- iii. Do the sample results with failed surrogate recoveries have data flags? NA  Yes / No (explain)

If so, are the data flags clearly defined?  Yes / No / NA

- iv. Is the data quality or usability affected?  No or explain. – **Note: the GRO surrogate was recovered above the laboratory control limit due to high levels of hydrocarbon in the sample.**

**d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)**

- i. Is at least one trip blank (TB) reported per matrix, analysis and cooler? NA / Yes  No – **Note: this was sample of investigation-derived waste retrieved from a storage drum to determine the proper soil-disposal option, so a trip blank was not submitted for analysis.**
- ii. Are all results less than the PQL?  NA / Yes / No
- iii. If TB is above the PQL, what samples are affected?  NA or list samples
- iv. Is the data quality or usability affected?  No or explain.



**e. Field Duplicate**

i. Was at least one field duplicate submitted per matrix, analysis and 10 project samples?  
Yes  No  Note: this was sample of investigation-derived waste retrieved from a storage drum to determine the proper soil-disposal option, so duplicate samples were not submitted for analysis. The laboratory analyzed a duplicate sample, and the RPD between the two duplicates was less than one percent.

ii. Were the field duplicates submitted blind to the lab? Yes / No  NA

iii. Precision – Are all relative percent differences (RPDs) less than specified DQOs (recommended: 30% for water, 50% for soil) ? Yes / No  NA

iv. Is the data quality or usability affected?  No  Yes (explain)

**f. Decontamination or Equipment Blank (if applicable)**

Not Applicable or...

i. Are all results less than the PQL? Yes / No

ii. If results are above PQL, what samples are affected? NA or list

iii. Is the data quality or usability affected? Explain.

**7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)**

Not applicable or ...

a. Are they defined and appropriate? Yes / No

**Completed by:** Jon Lindstrom, Ph.D.

**Title:** Chemist

**Date:** November 5, 2008

**Consultant Firm:** Shannon & Wilson, Inc.

**CS Report Name:** Groundwater Investigation

**Laboratory Report Date:** October 16, 2008

**Laboratory Name:** SGS Environmental Services, Inc.

**Laboratory Report Numbers:** 1085951

**ADEC File Number:** 100.26.043

**ADEC Hazard ID:** 22871