Second Supplemental Site Characterization Report

Ione Petroleum contamination Site
Ione, Washington

for
Washignton State Department of Ecology and Science Applications International Corporation

August 31, 2011

GeoEngineers
Earth Science + Technology

Second Supplemental Site Characterization Report

Ione Petroleum Contamination Site
Ione, Washington

for
Washington State Department of Ecology and Science Applications International Corporation

August 31, 2011

GeoEngineers

523 East Second Avenue
Spokane, Washington 99202
509.363.3125

30 YEARS 2010

Second Supplemental Site Characterization Report

Ione Petroleum Contamination Site
Ione, Washington

File No. 0504-058-01

August 31, 2011

Prepared for:

Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe Street
Spokane, Washington 99205

Attention: Doug Ladwig, PG, PHG, Site Manager

Prepared by:

GeoEngineers, Inc.
523 East Second Avenue
Spokane, Washington 99202
509.363.3125

Dave Lauder, PE
Project Manager

Bruce D. Williams
Principal

JRH:JDL:BDW:mlh:cje;tlm
http://projects/sites/0050405801/Draft/IoneSiteCharacterizationReport_Supplemental_August2011.docx

GeoEngineers

Table of Contents

APPENDICES

1.0 INTRODUCTION

This supplemental report presents results of additional site characterization activities conducted in July and August 2011 at a site referred to as the Ione Petroleum Contamination Site located near Ione, Washington. The approximate location of the site is presented in the Vicinity Map, Figure 1. The site was the subject of previous site characterization activities, the results of which are presented in GeoEngineers' reports titled "Site Characterization Report, Ione Petroleum Contamination Site, Ione, Washington", dated October 14, 2010, "Supplemental Site Characterization Report, Ione Petroleum Contamination Site, Ione, Washington", dated January 3, 2011, and three subsequent Quarterly Groundwater Monitoring Reports, dated: January 25, 2011; May 5, 2011; and June 29, 2011.

Details regarding the site are presented in the previous reports for this project. The results of the previous site characterization and groundwater monitoring efforts indicate that a plume of petroleum-contaminated groundwater (gasoline) is present beneath the site, extending from the Airport Kwik Stop property, downgradient through the Cabin Grill property to undeveloped property (referred to as the Vacant Property) located south and east of the Cabin Grill property.

The activities described in this supplemental report were conducted to provide additional information regarding the nature and extent of petroleum contamination of soil and groundwater at the site, particularly areas downgradient of the Cabin Grill. These activities were prompted by identified data gaps regarding the groundwater flow path and extent of the petroleum plume downgradient of the Cabin Grill.

This report describes the field investigation and chemical analytical results from soil samples collected from the supplemental explorations, and results of an additional round of groundwater sampling of the site monitoring wells. Logs of the new monitoring wells and a description of field procedures during well installation are presented in Appendix A. Detailed descriptions of field procedures during groundwater monitoring are presented in Appendix B. Analytical reports are presented in Appendix C.

2.0 SCOPE OF SERVICES

The purpose of the supplemental activities was to provide additional information regarding groundwater flow direction and the extent of the plume downgradient of the Cabin Grill. Our services were completed in general accordance with Work Assignment No. C110145D-Amendment 1, between Ecology and GeoEngineers. Specific tasks conducted during this phase included:

- Drilled, installed, and developed three monitoring wells. The borings were drilled using a hollow-stem auger drill rig to depths ranging from 40 to 50 feet below ground surface (bgs). The monitoring wells were installed at locations identified in consultation with the Washington State Department of Ecology (Ecology) based on results of the previous site characterization and groundwater monitoring activities.

- Submitted soil samples to Anatek Laboratories of Spokane, Washington (Anatek) for analysis of gasoline-range petroleum hydrocarbons (GRPH) using Northwest Method NWTPH-Gx, and volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene and xylenes (BTEX compounds), ethylene dibromide (EDB), 1,2 dicholorethane (EDC), methyl tertiary butyl ether (MTBE) and naphthalene using EPA Method 8260.
- Completed one round of groundwater monitoring including measuring water levels and water quality parameters, and collecting groundwater samples.
- Submitted groundwater samples to Anatek for analysis of GRPH and VOCs.
- Subcontracted a licensed surveyor to record elevations and locations of the supplemental monitoring wells.

3.0 FIELD ACTIVITIES

3.1. Monitoring Well Installation

Three supplemental monitoring wells (MW-13 through MW-15) were advanced at the site between July 26 and July 27, 2011 using a hollow-stem auger drill rig. Ecology and GeoEngineers selected the monitoring well locations based on chemical analytical results and groundwater level information obtained from previous sampling events. Soil samples were collected using a standard penetration test (SPT) sampler. Following installation, the monitoring wells were developed on July 28, 2011 by gently surging and bailing to stabilize the filter pack and formation materials surrounding the well screens. Monitoring well locations are shown on Groundwater Elevations and Flow Direction-August 2011, Figure 2.

3.1.1. Cabin Grill

Monitoring well MW-13 was advanced on the Cabin Grill property to a depth of about 48½ feet bgs. No sheen was observed and headspace vapors were not detected from soil samples collected from the exploration.

3.1.2. Vacant Property

Monitoring wells MW-14 and M-15 were advanced on the vacant property to depths ranging from 40 to 50 feet bgs. No sheen was observed on soil samples collected from the explorations. Headspace vapors were not detected, with the exception of the soil samples collected from well MW-15 at a depth of about 48½ to 50 feet, where a headspace vapor reading of 22.7 parts per million (ppm) was measured.

3.2. Surveying

Thomas Dean and Hoskins Inc. (TD&H) surveyed the locations and elevations of the supplemental monitoring wells on August 12, 2011. TD&H also re-surveyed the elevations of monitoring wells MW-5 and MW-8. TD&H provided results of their survey in an electronic communication on August 15, 2011, which included coordinates and elevations of the wells.

3.3. Groundwater Monitoring

One round of groundwater monitoring was completed on August 2 through August 4, 2011. Depth to groundwater at the locations of all fifteen wells were measured on August 2, 2011, which was used to calculate groundwater elevations. Groundwater samples were collected from all of the wells except MW-5 between August 3 and August 4, 2011.

4.0 SUBSURFACE CONDITIONS

4.1. Soil Conditions

Subsurface conditions encountered within the supplemental explorations were consistent with the descriptions provided in the previous reports. The sand unit and the silt and clay unit were encountered within the supplemental explorations as described below.

Loose to medium dense sand with variable silt and gravel content was encountered in the supplemental borings. The sand unit extended from the ground surface to depths ranging from about 39 feet bgs in MW-14 to 49½ feet bgs in MW-15. The sand unit encountered in the explorations was consistent with geologic descriptions for the outwash-and alluvially-deposited unconfined aquifer of sand and gravel, as described in the previous reports.

Below the sand unit, soft to medium stiff clay was encountered at all three explorations. The clay unit extended to the depths explored. The clay unit is consistent with the geologic descriptions for the glaciolacustrine-deposited aquitard of silt and clay, as described in the previous reports.

4.2. Groundwater Conditions

4.2.1. General

Fluid (water and petroleum product) levels were measured on August 2, 2011 at the 15 site monitoring wells (MW-1 through MW-15). Fluid elevations were calculated by comparing measured fluid depths to wellhead elevations and are referenced to the North American Vertical Datum of 1988 (NAVD 88). The monuments of wells MW-5 and MW-8 were replaced by a licensed well driller from GeoEngineers during the summer of 2011 to repair damage to those monuments which occurred during the winter of 2010/2011. The well casing for MW-8 was adjusted to accommodate the new monument. The new elevation of the top of the well casing for MW-8 is shown in Summary of Groundwater Level Measurements, Table 1.

Fluid depths and elevations are presented in Table 1. Groundwater elevation data, and interpreted groundwater elevation distribution and flow direction, are graphically presented in Figure 2. Field methods are described in Appendix B.

4.2.2. Fluid Elevations

Depth to groundwater measurements during the August 2, 2011 monitoring event, referenced to the top rim of the PVC well casing, ranged from 14.80 feet in MW-10 to 41.56 feet in MW-15. Groundwater elevations ranged from 2,070.76 feet in MW-10 to 2,078.33 feet in MW-1.

Using an interface probe, petroleum product was measured in monitoring well MW-5 at a depth of about 36.07 feet (Elevation 2,073.21 feet) during the August 2, 2011 monitoring event. Depth to groundwater in MW-5 was about 36.94 feet (Elevation 2,072.34 feet), indicating about 0.87 feet of petroleum product within the well. The relative densities of gasoline and groundwater were used to develop an estimate for the equivalent groundwater elevations at MW-5 (in the absence of petroleum product) in the following equation:

$$GW = (SG \times T) + IE$$

where GW = equivalent groundwater elevation;
SG = specific gravity of product (0.75 for gasoline);
T = thickness of product measured in water using oil/water interface probe; and
IE = elevation of water/product interface measured in the well.

This analysis yielded an equivalent groundwater elevation estimate of 2072.99 feet in monitoring well MW-5.

Groundwater elevations increased in the existing site monitoring wells relative to the previous groundwater monitoring event conducted on May 10, 2011. Monitoring well MW-8 was observed to have the most significant change in groundwater elevation, increasing 1.53 feet relative to the previous monitoring event. Monitoring well MW-10 was observed to have the least change in groundwater elevation, increasing 0.43 feet relative to the previous monitoring event. Groundwater elevations on average increased about 1.13 feet relative to the previous monitoring event (May 10, 2011). Additionally, groundwater was measured at higher elevations at all twelve existing monitoring wells than any of the previous monitoring events.

4.3. Hydraulic Gradient and Groundwater Flow Direction

Interpreted groundwater flow direction during the August 2, 2011 groundwater monitoring event generally was east-southeast; away from upland recharge areas to the west and towards the Pend Oreille River to the east. However, the local distribution in groundwater elevation, flow direction and gradient observed at the site was relatively complex. Within the west portion of the site (approximately between monitoring wells MW-1 and MW-8), hydraulic gradient was relatively steep at about 1.6×10^{-2} feet per foot (about 85 feet per mile) and groundwater flowed east. Within the east portion of the site (approximately between monitoring wells MW-8 and MW-10), hydraulic gradient flattened significantly, averaging about 2.4×10^{-3} feet per foot (about 12.7 feet per mile) and groundwater flowed southeast. Variation in hydraulic gradient could be caused by soil permeability variation across the site (an increase in permeability to the east), the geometry of perching layers, and/or Pend Oreille River stage. Converse to groundwater monitoring events conducted in August 2011, indications of a cone of depression centered around the Cabin Grill well and groundwater mounding related to the septic drain field located to the east of the Cabin Grill were not observed. The interpreted flow direction and gradients were similar to those observed during the previous monitoring events. However, within the east portion of the site, the groundwater flow direction appeared to be more easterly than previous monitoring events.

5.0 SOIL CHEMICAL ANALYTICAL RESULTS

5.1. General

During the supplemental investigation, five soil samples were submitted for analysis. A summary of analytical results from soil samples are presented in Summary of Soil Chemical Analytical Results – Soil Samples, Table 2. Copies of original laboratory certificates are included in Appendix C. Exploration locations completed to date where GRPH and BTEX compounds were detected in soil samples at concentrations greater than MTCA Method A cleanup levels for unrestricted land use are presented in GRPH and BTEX in Soil Samples, Figure 3.

5.2. Cabin Grill

Two samples were submitted from well MW-13. Sample MW-13(33.5) was submitted for analysis of VOCs, and sample MW-13(38.5) was submitted for analysis of GRPH. GRPH and BTEX compounds were not detected. Methylene chloride was detected at a concentration of 0.0383 milligrams per kilogram (mg/kg), greater than the Model Toxics Control Act (MTCA) Method A cleanup level for unrestricted land use (0.02 mg/kg). However, the trip blank also contained concentrations of methylene chloride and acetone, common laboratory contaminants. Based on discussions with the laboratory, it is likely that methylene chloride was introduced into the sample at the laboratory, and was not indicative of in-situ conditions. Therefore, the sample was qualified as non-detect for methylene chloride. Practical quantitation limits (PQLs), with the exception of EDB, were reported at concentrations less than MTCA Method A unrestricted land use cleanup levels.

5.3. Vacant Property

Two soil samples were submitted from well MW-14, and one sample was submitted from MW-15. GRPH were not detected in the samples from MW-14 and MW-15. BTEX compounds also were not detected in the VOC sample submitted from MW-14. Methylene chloride was detected in the VOC sample from MW-14 at a concentration of 0.0404 mg/kg, greater than the MTCA Method A cleanup level but was qualified as non-detect for the reason mentioned above. PQLs were reported at concentrations less than MTCA Method A unrestricted land use cleanup levels, with the exception of EDB.

6.0 GROUNDWATER CHEMICAL ANALYTICAL RESULTS

6.1. General

Groundwater samples were collected from monitoring wells MW-1 through MW-4, MW-6 through MW-15 and from the Cabin Grill well between August 3 and 4, 2011 and submitted to Anatek for analysis of GRPH and VOCs.

With the exception of well MW-8, groundwater samples from the monitoring wells were collected using a portable bladder pump consistent with the U.S. Environmental Protection Agency (EPA) low-flow groundwater sampling procedure and summarized in Appendix B of this report. Purge water was retained in 55-gallon drums for subsequent disposal. The sample from well MW-8 was sampled using a small-diameter bailer. The well was not purged before sampling. Typical analytical results for low-flow samples and bailer-collected samples are not comparable.

Contaminant concentrations for bailer-collected samples typically are higher. The sample from the Cabin Grill well was collected from a port located within the Cabin Grill well house. The port is located upstream (before treatment) from the storage tanks and carbon filtration system.

During the August 2011 monitoring event, a laboratory-blind duplicate was collected from monitoring well MW-4 and labeled "Duplicate-1." A trip blank also was collected.

Groundwater analytical results for the groundwater sampling event in August 2011 are provided in Summary of Groundwater Chemical Analytical Results – Monitoring Well Samples, Table 3. Copies of original laboratory certificates are included in Appendix C. Analytical results for GRPH and BTEX also are presented on Figure 2. Exploration locations completed to date where GRPH and BTEX compounds have been detected in groundwater samples at concentrations greater than MTCA Method A cleanup levels are presented in GRPH and BTEX in Groundwater Samples, Figure 4.

6.2. Ione Airport

GRPH and VOCs were not detected in the sample from MW-2. PQLs were reported at concentrations less than the MTCA Method A cleanup levels for groundwater (with the exception of vinyl chloride).

6.3. Airport Kwik Stop

GRPH was detected in the sample from well MW-8 at a concentration of 227,000 micrograms per liter (µg/L), greater than the MTCA Method A cleanup level (800 µg/L). BTEX compounds benzene (2,140 µg/L), ethylbenzene (6,740 µg/L), toluene (26,700 µg/L) and total xylenes (39,300 µg/L) also were detected in the sample from MW-8 at concentrations greater than MTCA Method A cleanup levels of 5 µg/L, 700 µg/L, 1,000 µg/L and 1,000 µg/L, respectively. Naphthalene also was detected in the sample from MW-8 at a concentration (869 µg/L), greater than the MTCA Method A cleanup level (160 µg/L).

1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene also were detected in the groundwater sample from MW-8 at concentrations of 3,560 µg/L and 1,080 µg/L, respectively. MTCA Method A cleanup levels have not been established for these contaminants. Well MW-8 is located near, and downgradient of the Airport Kwik Stop fuel dispensers.

GRPH and VOCs were not detected in the samples from MW-1 and MW-7. Wells MW-1 and MW-7 are located upgradient of the Airport Kwik Stop fuel dispensers.

6.4. Cabin Grill

A groundwater sample was not collected from MW-5 because of the previous high concentrations of GRPH and BTEX compounds detected in groundwater samples from monitoring well MW-5 and because free petroleum product was measured during the August 2011 sampling event. The decision to forego sampling in MW-5 was discussed with and approved by Ecology.

GRPH was detected in samples from well MW-6 and the Cabin Grill well at concentrations (21,900 µg/L and 45,500 µg/L, respectively) greater than the MTCA Method A cleanup level, and in the samples from wells MW-4 and MW-13 at concentrations (687 µg/L and 771 µg/L, respectively) less than the MTCA Method A cleanup level. Benzene was detected in samples from

MW-6, MW-13 and the Cabin Grill well at concentrations (2,560 µg/L, 7.98 µg/L and 540 µg/L, respectively) greater than the MTCA Method A cleanup level, and is the sample from MW-4 at a concentration (3.85 µg/L) less than the MTCA Method A cleanup level. Toluene was detected in the samples from MW-6 and the Cabin Grill well at concentrations (2,130 µg/L and 5,440 µg/L, respectively) greater than the MTCA Method A cleanup level, and in samples from MW-4 and MW-13 at concentrations (45.5 µg/L and 2.66 µg/L) less than the MTCA Method A cleanup level. Total xylenes were detected in the samples from MW-6 and the Cabin Grill well at concentrations (3,850 µg/L and 7,710 µg/L, respectively) greater than the MTCA Method A cleanup level, and in the samples from MW-4 and MW-13 at concentrations (138.4 µg/Land 151.7 µg/L, respectively) less than the MTCA Method A cleanup level. Ethylbenzene was detected in the sample from the Cabin Grill well at a concentration (997 µg/L) greater than the MTCA Method A cleanup level, and in the samples from wells MW-4, MW-6 and MW-13 at concentrations (9.36 µg/L, 547 µg/L and 31 µg/L, respectively) less than the MTCA Method A cleanup level. Monitoring wells MW-4, MW-6, MW-13 and the Cabin Grill well are located downgradient of the Airport Kwik Stop fuel dispensers. Naphthalene also was detected in the sample from the Cabin Grill well at a concentration (244 µg/L) greater than the MTCA Method A cleanup level, and in the samples from MW-6 and MW-13 at concentrations (97.7 µg/L and 16.5 µg/L, respectively) less than the MTCA Method A cleanup level.

1,2,4-trimethylbenzene (237 µg/L, 10.3 µg/L and 967 µg/L) and 1,3,5-trimethylbenzene (192 µg/L, 38.5 µg/L and 433 µg/L) were detected in the groundwater samples from MW-6, MW-13 and the Cabin Grill well, respectively. N-propylbenzene also was detected in the groundwater samples from MW-13 and the Cabin Grill well at concentrations of 3.28 µg/L and 116 µg/L, respectively. Isopropylbenzene (1.61 µg/L), n-butylbenzene (2.05 µg/L) and p-isopropyltoluene (1.14 µg/L) also were detected in the groundwater sample from well MW-13. MTCA Method A cleanup levels have not been established for these contaminants. Other VOCs were not detected. However, the reported PQLs for the non-detect VOCs with established MTCA Method A cleanup levels (with the exception of 1,1,1-trichloroethane) were elevated to greater than the applicable cleanup levels because the high concentrations of BTEX contaminants required dilution of the samples before analyzation.

The duplicate sample (Duplicate-1) from MW-4 contained GRPH and BTEX compounds less than MTCA Method A cleanup levels. Other VOCs were not detected, or were detected at concentrations less than the MTCA Method A cleanup levels. The PQL for vinyl chloride was greater than the MTCA Method A cleanup level.

6.5. Vacant Property

GRPH was detected in the groundwater samples collected from wells MW-3 and MW-15 at concentrations (74,700 µg/L and 1,660 µg/L, respectively) greater than the MTCA Method A cleanup level. Benzene, toluene, ethylbenzene and total xylenes were detected at concentrations (5,470 µg/L, 16,200 µg/L, 1,700 µg/L and 9,990 µg/L, respectively) greater than MTCA Method A cleanup levels in the sample from MW-3. Benzene also was detected in the sample from MW-15 at a concentration (847 µg/L) greater than the MTCA Method A cleanup level. Ethylbenzene, toluene and total xylenes also were detected in the sample from MW-15 at concentrations (129 µg/L, 29.8 µg/L and less than 98.2 µg/L, respectively) less than the MTCA Method A cleanup levels.

Naphthalene was detected in the sample from MW-15 at a concentrations of 41.9 µg/L, less than MTCA Method A cleanup level.

1,2,4-trimethylbenzene was detected in the groundwater sample from MW-3 at a concentration of 853 µg/L. 1,3,5-trimethylbenzene was detected in the groundwater sample from MW-15 at a concentration of 27.0 µg/L. Other VOCs from the samples from MW-3 and MW-15 were not detected. However, the reported PQLs for the non-detected VOCs with established MTCA Method A cleanup levels were elevated to greater than the applicable cleanup levels because the high concentrations of BTEX contaminants required dilution of the samples before analyzation.

GRPH and VOCs were not detected in the groundwater samples collected from MW-9, MW-10, MW-11 and MW-14. The PQLs for the groundwater samples were below the MTCA Method A cleanup levels (with the exception of vinyl chloride).

7.0 SUMMARY AND CONCLUSIONS

Supplemental soil and groundwater assessment activities were conducted from July 26 through August 4, 2011 for the site located in Ione, Washington. Three new groundwater monitoring wells were placed downgradient of the Cabin Grill well to provide more information regarding the lateral extent of petroleum contamination in soil and groundwater associated with the release from the Airport Kwik Stop. Subsurface conditions encountered within the supplemental explorations were consistent with conditions encountered within previous explorations, and consisted of sand underlain by clay.

Groundwater elevations ranged from 0.43 feet to 1.53 feet higher than elevations measured in May 2011. It was noted that the Airport Kwik Stop was vacant during all previous monitoring events. However, during the May 2011 monitoring event repairs were being made to the building, and sometime between the May 2011 monitoring event and the August 2011 monitoring event, the Airport Kwik Stop become operational, including serving food and selling groceries. We understand that the Airport Kwik Stop is not currently selling or storing petroleum. It is possible that increased water use and discharge to the on-site septic system, which we understand is located upgradient of well MW-8, could be contributing to groundwater recharge near MW-8. Increased groundwater recharge could be a contributing factor to the larger groundwater elevation increase measured in MW-8 relative to the other site monitoring wells between the May and August 2011 monitoring events.

About 0.87 feet of petroleum product was measured on the groundwater surface in well MW-5, based on the oil-water interface probe measurements. A disposable bailer also was lowered into MW-5 to sample across the oil-water interface. We measured approximately 8 to 9 inches of floating gasoline product in the bailer sample collected from MW-5. An oil-water interface probe and disposable bailer also were lowered into MW-8 to sample across the oil-water interface. While a distinct oil phase was not observed in the sample collected from MW-8, visual observation indicated that the water contained contaminates at a high enough concentration to affect the clarity of the water, but not high enough to be measured by the interface probe.

Groundwater flow during the August 2011 monitoring event generally was towards the east-southeast, under varying hydraulic gradients, ranging between about 1.6 x 10^{-2} feet per foot (ft/ft) within western portions of the site and about 2.4 x 10^{-3} ft/ft within eastern portions of the site. This magnitude is consistent with previous measurements at the site. The flow direction within the eastern portions of the site was more easterly than previous measurements.

Soil does not appear to be contaminated at the exploration locations. Results of groundwater monitoring and sampling are summarized by the following:

- GRPH and/or BTEX concentrations exceeded MTCA Method A cleanup levels in groundwater samples from MW-3, MW-6, MW-8, MW-13, MW-15 and the Cabin Grill domestic well. These wells are located downgradient of the Airport Kwik Stop fuel dispensers.
- About 0.87 feet of oil product was measured in well MW-5.
- GRPH and VOCs were not detected in groundwater samples from upgradient wells MW-1 and MW-7.
- GRPH and VOCs were not detected in groundwater samples from cross- and downgradient wells MW-2, MW-9, MW-10, MW-11, MW-12 and MW-14.
- The highest concentration of GRPH detected during the August 2011 event was from the groundwater sample collected from well MW-8 at a concentration of 227,000 µg/L (about 280 times the MTCA Method A cleanup level).
- The highest concentration of benzene detected during the August 2011 event was from the groundwater sample collected from well MW-3 at a concentration of 5,470 µg/L (about 1,094 times the MTCA Method A cleanup level).

The following bulleted items summarize changes in concentrations from the August 2011 monitoring event relative to the previously collected samples (fourth quarterly event) in each site well during the May 2011 sampling event:

- Concentrations of GRPH and BTEX compounds increased in wells MW-3 and MW-4. The concentrations of GRPH and BTEX compounds in MW-3 were the highest measured to date. The concentrations of GRPH and BTEX compounds in MW-4 were the highest since the August 2010 monitoring event. However, measured turbidity levels were significantly higher during sampling of MW-4 than during previous sampling events. The high turbidity levels could be a contributing factor to the increased concentrations of GRPH and BTEX compounds detected in the sample from MW-4 during the August 2011 monitoring event.
- Concentrations of GRPH increased in wells MW-6 and MW-8, while the concentrations of benzene decreased in these wells. The concentrations of GRPH and BTEX compounds in MW-6 were the highest since the August 2010 monitoring event. The concentrations of GRPH, ethylbenzene, toluene and total xylenes in MW-8 were the highest measured to date.
- Concentrations of GRPH, ethylbenzene, toluene and total xylenes increased in the Cabin Grill domestic well (and were the highest recorded to date). The concentration of benzene decreased (and was the lowest concentration recorded to date).

Based on review of all of the sampling events, concentrations of GRPH and BTEX compounds from groundwater samples from the contaminated wells (MW-3, MW-4, MW-5, MW-6, MW-8 and the Cabin Grill domestic well) have not indicated any specific trends.

Results of analytical testing indicate the shallow aquifer underlying the Airport Kwik Stop; Cabin Grill and vacant properties is contaminated with GRPH and VOCs, particularly BTEX compounds. Results also indicate that the leading edge of the plume is located downgradient of well MW-15, which is approximately 1,100 feet southeast of the Airport Kwik Stop fuel dispensers, and that the downgradient edges of the plume are bounded by wells MW-12, MW-14 and MW-10.

Comparison of the ratios of benzene concentrations to GRPH concentrations of the groundwater samples from the contaminated wells indicates that the highest benzene to GRPH ratio was from the groundwater sample from MW-15, indicating that MW-15 might be near the leading edge of the plume. Evaluation of benzene and GRPH concentrations also indicates that the benzene to GRPH ratio is greater in the August 2011 sample from well MW-3, than from the August 2011 samples from MW-6 and the Cabin Grill domestic well. Based on this data, it is possible that a new pulse of relatively fresh petroleum contamination has reached the groundwater surface underlying the Airport Kwik Stop from overlying vadose zone contamination, and is migrating downgradient, with the leading edge of the pulse located near MW-3.

8.0 LIMITATIONS

We have prepared this report for the exclusive use of the Washington State Department of Ecology and their authorized agents for the Ione Petroleum Contamination Site located in Ione, Washington.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to the Appendix D titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

TABLES

GeoEngineers

Table 1

Summary of Groundwater Level Measurements

Ione Petroleum Contamination

Ione, Washington

Well Number	Date Measured	Top of Casing Elevation[1] (feet)	Depth to Water[2] (feet)	Groundwater Elevation (feet)
MW-1	08/05/10	2,106.45	29.41	2,077.04
	11/10/10	2,106.45	29.40	2,077.05
	02/09/11	2,106.45	29.76	2,076.69
	05/10/11	2,106.45	29.10	2,077.35
	08/02/11	2,106.45	28.12	2,078.33
MW-2	08/05/10	2,109.36	37.54	2,071.82
	11/10/10	2,109.36	37.53	2,071.83
	02/09/11	2,109.36	37.67	2,071.69
	05/10/11	2,109.36	37.02	2,072.34
	08/02/11	2,109.36	35.56	2,073.80
MW-3	08/05/10	2,110.17	38.66	2,071.51
	11/10/10	2,110.17	38.63	2,071.54
	02/09/11	2,110.17	38.73	2,071.44
	05/10/11	2,110.17	38.19	2,071.98
	08/02/11	2,110.17	36.90	2,073.27
MW-4	08/05/10	2,109.31	38.17	2,071.14
	11/10/10	2,109.31	38.14	2,071.17
	02/09/11	2,109.31	38.26	2,071.05
	05/10/11	2,109.31	37.69	2,071.62
	08/02/11	2,109.31	36.36	2,072.95
MW-5	08/05/10	2,109.28	38.57	2,070.71
	11/10/10	2,109.28	37.90/38.51[3]	2,071.23[4]
	02/09/11	2,109.28	37.97/38.72[3]	2,071.12[4]
	05/10/11	2,109.28	37.50/37.85[3]	2,071.69[4]
	08/02/11	2,109.28	36.07/36.94[3]	2072.99[4]
MW-6	08/05/10	2,110.34	39.72	2,070.62
	11/10/10	2,110.34	39.68	2,070.66
	02/09/11	2,110.34	39.80	2,070.54
	05/10/11	2,110.34	39.17	2,071.17
	08/02/11	2110.34	38.12	2,072.22
MW-7	08/05/10	2,109.31	36.27	2,073.04
	11/10/10	2,109.31	36.27	2,073.04
	02/09/11	2,109.31	36.38	2,072.93
	05/10/11	2,109.31	35.97	2,073.34
	08/02/11	2109.31	34.66	2,074.65
MW-8	08/05/10	2,109.72	37.93	2,071.79
	11/10/10	2,109.72	37.90	2,071.82

Well Number	Date Measured	Top of Casing Elevation[1] (feet)	Depth to Water[2] (feet)	Groundwater Elevation (feet)
MW-8 cont.	02/09/11	2,109.72	38.01	2,071.71
	05/10/11	2,109.72	37.45/37.70[3]	2,072.21[4]
	8/2/2011[5]	2,109.65	35.91	2,073.74
MW-9	11/10/10	2,109.43	38.43	2,071.00
	02/09/11	2,109.43	38.53	2,070.90
	05/10/11	2,109.43	37.95	2,071.48
	08/02/11	2109.43	37.00	2,072.43
MW-10	11/10/10	2,085.56	15.96	2,069.60
	02/09/11	2,085.56	16.05	2,069.51
	05/10/11	2,085.56	15.23	2,070.33
	08/02/11	2085.56	14.80	2,070.76
MW-11	11/10/10	2,093.44	23.33	2,070.11
	02/09/11	2,093.44	23.43	2,070.01
	05/10/11	2,093.44	22.66	2,070.78
	08/02/11	2093.44	22.00	2,071.44
MW-12	11/10/10	2,108.87	37.98	2,070.89
	02/09/11	2,108.87	38.11	2,070.76
	05/10/11	2,108.87	37.51	2,071.36
	08/02/11	2108.87	36.19	2,072.68
MW-13	08/02/11	2,109.09	36.77	2,072.32
MW-14	08/02/11	2,103.16	31.61	2,071.55
MW-15	08/02/11	2,112.90	41.56	2,071.34

Notes:

[1]Top of casing elevation survey performed by Thomas, Dean & Hoskins, Inc. (TD&H). Elevations are referenced to NAVD 88.

[2]Depth to water measurements referenced to the top of PVC casing.

[3]For MW-5, 37.50/37.85, and MW-8, 37.45/37.70 indicates depth to top of free product/depth to groundwater measured using an oil-water interface probe.

[4]Groundwater elevation at MW-5 for the November 2010 , February 2011, May 2011, and August 2011 monitoring events, and MW-8 for the May 2011 monitoring event, was calculated using the following equation:

GW = SG x T + IE; where GW = equivalent groundwater elevation, SG = specific gravity of free product (0.75 for gasoline),

T = thickness of product measured in water using oil/water interface probe , IE = elevation of water/product interface measured in the well.

[5]Top of well casing adjusted during repairs to well monument in June 2011. Top of well casing resurveyed by TD&H in August 2011.

http://projects/sites/0050405801/Final/[Ione GW Monitoring Tables Q5.xlsx]Table 1

Table 2

Summary of Soil Chemical Analytical Results - Soil Samples[1]

Ione Petroleum Contamination

Ione, Washington

Analyte	Unit	MTCA Method A Cleanup Level	Well No.	MW-13		MW-14		MW-15
			Sample Number	MW-13 (33.5)	MW-13 (38.5)	MW-14 (28.5)	MW-14 (33.5)	MW-15 (43.5)
			Date	07/26/11	07/26/11	07/26/11	07/26/11	07/27/11
GRPH [2]	mg/kg	100		NT	<2.5	NT	<2.5	<2.5
Volatile Organic Compounds [3]								
Benzene	mg/kg	0.03		<0.02455	NT	<0.02625	NT	NT
Ethylbenzene	mg/kg	6		<0.02455	NT	<0.02625	NT	NT
Toluene	mg/kg	7		<0.02455	NT	<0.02625	NT	NT
m,p-Xylene	mg/kg	9[4]		<0.02455	NT	<0.02625	NT	NT
o-Xylene	mg/kg			<0.02455	NT	<0.02625	NT	NT
1,1,1,2-Tetrachloroethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,1,1-Trichloroethane	mg/kg	2		<0.02455	NT	<0.02625	NT	NT
1,1,2,2-Tetrachloroethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,1,2-Trichloroethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,1-Dichloroethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,1-Dichloroethene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,1-Dichloropropene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2,3-Trichlorobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2,3-Trichloropropane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2,4-Trichlorobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2,4-Trimethylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2-Dibromoethane (EDB)	mg/kg	0.005		<0.02455	NT	<0.02625	NT	NT
1,2-Dichlorobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2-Dichloroethane (EDC)	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,2-Dichloropropane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,3,5-Trimethylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,3-Dichlorobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,3-Dichloropropane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
1,4-Dichlorobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
2,2-Dichloropropane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
2-Chlorotoluene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
2-Hexanone	mg/kg	NE		<0.12275	NT	<0.13125	NT	NT

Analyte	Unit	MTCA Method A Cleanup Level	Well No.	MW-13		MW-14		MW-15
			Sample Number	MW-13 (33.5)	MW-13 (38.5)	MW-14 (28.5)	MW-14 (33.5)	MW-15 (43.5)
			Date	07/26/11	07/26/11	07/26/11	07/26/11	07/27/11
4-Chlorotoluene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Acetone	mg/kg	NE		<0.12275	NT	<0.13125	NT	NT
Acrylonitrile	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Bromobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Bromochloromethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Bromodichloromethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Bromoform	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Bromomethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Carbon disulfide	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Carbon Tetrachloride	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Chlorobenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Chloroethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Chloroform	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Chloromethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
cis-1,2-Dichloroethene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
cis-1,3-Dichloropropene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Dibromochloromethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Dibromomethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Dichlorodifluoromethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Hexachlorobutadiene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Isopropylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Methyl ethyl ketone (MEK)	mg/kg	NE		<0.12275	NT	<0.13125	NT	NT
Methyl isobutyl ketone (MIBK)	mg/kg	NE		<0.12275	NT	<0.13125	NT	NT
Methylene chloride	mg/kg	0.02		<0.0245(u)	NT	<0.02625(u)	NT	NT
Methyl tert buytl ether (MTBE)	mg/kg	0.1		<0.02455	NT	<0.02625	NT	NT
Naphthalene	mg/kg	5		<0.02455	NT	<0.02625	NT	NT
n-Butylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
n-Propylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
p-Isopropyltoluene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
sec-Butylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Styrene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
tert-Butylbenzene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Tetrachloroethene	mg/kg	0.05		<0.02455	NT	<0.02625	NT	NT
trans-1,2-Dichloroethene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
trans-1,3-Dichloropropene	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT
Trichloroethene	mg/kg	0.03		<0.02455	NT	<0.02625	NT	NT
Trichlorofluoromethane	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-13 (33.5) 07/26/11	MW-13 (38.5) 07/26/11	MW-14 (28.5) 07/26/11	MW-14 (33.5) 07/26/11	MW-15 (43.5) 07/27/11
Vinyl chloride	mg/kg	NE		<0.02455	NT	<0.02625	NT	NT

Notes:

[1]Chemical analyses conducted by Anatek Labs, Inc. located in Spokane, Washington.

[2]Gasoline analyzed using Northwest Method NWTPH-Gx.

[3]Volatile organic compounds analyzed using by EPA Methods 8260B/8260C.

[4]Cleanup level for total xylenes is 9 mg/kg.

mg/kg = milligrams per kilogram; NE = not established; MTCA = Model Toxics Control Act; NT = not tested; (u) flag qualifier indicates that due to trip blank contamination, the detected contaminant was qualified as "non-detect". See Appendix C, Data Quality Assessment Summary

http://projects/sites/0050405801/Final/[Ione GW Monitoring Tables Q5.xlsx]Table 2

Table 3

Summary of Groundwater Chemical Analytical Results - Monitoring Well Samples[1]

Ione Petroleum Contamination

Ione, Washington

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-1 MW-1-080510 08/05/10	MW-1 MW-1-111010 11/10/10	MW-1 MW-1-021611 02/16/11	MW-1 MW-1-051111 05/11/11	MW-1 MW-1-080311 08/03/11	MW-2 MW-2-080610 08/06/10	MW-2 MW-2-111010 11/10/10	MW-2 MW-2-021611 02/16/11	MW-2 MW-2-051111 05/11/11	MW-2 MW-2-080311 08/03/11
DRPH[2]	µg/L	500		<100					<100				
ORPH[2]	µg/L	500		<500					<100				
GRPH [3]	µg/L	800		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Volatile Organic Compounds [4]													
Benzene	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	700		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	1,000		1.81	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m,p-Xylene	µg/L	1,000[5]		1.93	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L			0.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	200		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	µg/L	NE		0.62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	µg/L	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane (EDC)	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	µg/L	NE		0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,2-Dichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Hexanone	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
4-Chlorotoluene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acetone	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Acrylonitrile	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromochloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon disulfide	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analyte	Unit	MTCA Method A Cleanup Level	Well No.	MW-1					MW-2				
			Sample Number	MW-1-080510	MW-1-111010	MW-1-021611	MW-1-051111	MW-1-080311	MW-2-080610	MW-2-111010	MW-2-021611	MW-2-051111	MW-2-080311
			Date	08/05/10	11/10/10	02/16/11	05/11/11	08/03/11	08/06/10	11/10/10	02/16/11	05/11/11	08/03/11
cis-1,3-Dichloropropene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone (MEK)	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methyl isobutyl ketone (MIBK)	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride	µg/L	5		<2.5	<2.5	0.850	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methyl tert buytl ether (MTBE)	µg/L	20		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	µg/L	160		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	µg/L	NE		0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	µg/L	0.2		<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5
Dissolved Lead[5]	µg/L	15		<1					<1				
Lead[6]	µg/L	15		<1	<1				<1	<1			

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-3					MW-4					MW-5		
				MW-3-080610 08/06/10	MW-3-111010 11/11/10	MW-3-021611 02/16/11	MW-3-051111 05/11/11	MW-3-080311 08/03/11	MW-4-080610 08/06/10	MW-4-111010 11/11/10	MW-4-021711 02/17/11	MW-4-051111 05/11/11	MW-4-080311 08/03/11	MW-5-080610 08/06/10	MW-5-111010 11/11/10	MW-5-021711 02/17/11
DRPH[2]	µg/L	500		<100					<100					<100		
ORPH[2]	µg/L	500		<500					<500					<500		
GRPH[3]	µg/L	800		**24,500**	**20,200**	**24,200**	**40,300**	**74,700**	**4,940**	**1,190**	359	394	687	**188,000**	**80,600**	**110,000**
Volatile Organic Compounds[4]																
Benzene	µg/L	5		**2,680**	**1,940**	**1,980**	**2,460**	**5,470**	**21.3**	**9.36**	1.27 (J)[7,8]	1.19	3.85	**2,210**	**525**	**1,010**
Ethylbenzene	µg/L	700		**831**	314 (u)[9]	647	**963**	**1,700**	80.6	7.04 (u)[9]	1.34 (J)[7,8]	1.82	9.36	**3,210**	**2120 (u)**	**2,200**
Toluene	µg/L	1,000		**3,330**	**2870 (u)[9]**	**3,350**	**4,980**	**16,200**	462	78.3 (u)[9]	11.8 (J)[7,8]	9.12	45.5	**37,900**	**8420 (u)**	**13,800**
m,p-Xylene	µg/L	1,000[5]		**1,940**	**1680 (u)[9]**	**2,230**	**3,110**	**6,830**	425	94.5 (u)[9]	16.8[7,8]	30.4	74.8	**13,900**	**9330 (u)**	**9,080**
o-Xylene	µg/L			**615**	**653**	**771**	**1,280**	**3,160**	189	55.6	16.6 (J)[7,8]	31.1	63.6	**5,510**	**3,360**	**3,840**
1,1,1,2-Tetrachloroethane	µg/L	NE		<50	<5	<100	<50	<500	188	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,1,1-Trichloroethane	µg/L	200		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,1,2,2-Tetrachloroethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,1,2-Trichloroethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,1-Dichloroethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,1-Dichloroethene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,1-Dichloropropene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2,3-Trichlorobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2,3-Trichloropropane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2,4-Trichlorobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2,4-Trimethylbenzene	µg/L	NE		305	259	353	363	853	154	24.9	1.82	15.7	19.2	2,000	1,060	2,250
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2-Dibromoethane (EDB)	µg/L	0.01		<50	<5	<100	<50	<500	<5	<5	<0.01	<0.01	<0.5	<500	<250	<25
1,2-Dichlorobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2-Dichloroethane (EDC)	µg/L	5		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,2-Dichloropropane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,3,5-Trimethylbenzene	µg/L	NE		<50	136	171	168	<500	68.3	19.3	10.2	9.57	10.9	968	376	850
1,3-Dichlorobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,3-Dichloropropane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
1,4-Dichlorobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
2,2-Dichloropropane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
2-Chlorotoluene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
2-Hexanone	µg/L	NE		<250	<25	<500	<250	<2500	<25	<25	<2.5	<2.5	<0.5	<2,500	<1,250	<125
4-Chlorotoluene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Acetone	µg/L	NE		<250	<25	<500	<250	<2500	36.0	<25	<2.5	<2.5	3.52	<2,500	<1,250	<125
Acrylonitrile	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Bromobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Bromochloromethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Bromodichloromethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Bromoform	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Bromomethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Carbon disulfide	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Carbon Tetrachloride	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Chlorobenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Chloroethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Chloroform	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Chloromethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
cis-1,2-Dichloroethene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-3					MW-4					MW-5		
				MW-3-080610 08/06/10	MW-3-111010 11/11/10	MW-3-021611 02/16/11	MW-3-051111 05/11/11	MW-3-080311 08/03/11	MW-4-080610 08/06/10	MW-4-111010 11/11/10	MW-4-021711 02/17/11	MW-4-051111 05/11/11	MW-4-080311 08/03/11	MW-5-080610 08/06/10	MW-5-111010 11/11/10	MW-5-021711 02/17/11
cis-1,3-Dichloropropene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Dibromochloromethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Dibromomethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Dichlorodifluoromethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Hexachlorobutadiene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Isopropylbenzene	µg/L	NE		104	<5	<100	<50	<500	6.39	<5	<0.5	<0.5	<0.5	945	<250	118
Methyl ethyl ketone (MEK)	µg/L	NE		<250	<25	<500	<250	<2500	<25	<25	<2.5	<2.5	<2.5	<2,500	<1,250	<125
Methyl isobutyl ketone (MIBK)	µg/L	NE		<250	<25	<500	<250	<2500	<25	<25	<2.5	<2.5	<2.5	<2,500	<1,250	<125
Methylene chloride	µg/L	5		<250	<25	<500	<250	<2500	<25	<25	<2.5	<2.5	<2.5	<2,500	<1,250	<125
Methyl tert buytl ether (MTBE)	µg/L	20		<50	<5	<100	<50	<500	<25	<5	<0.5	<0.5	<0.5	<500	<250	<25
Naphthalene	µg/L	160		80.1	84.3	107	109	<500	10.3	<5	0.89 (J)[7,8]	0.75	0.96	<500	<250	**364**
n-Butylbenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	0.60	<500	<250	94.6
n-Propylbenzene	µg/L	NE		92.2	<5	<100	61.2	<500	15.1	<5	<0.5	0.53	0.51	691	<250	346
p-Isopropyltoluene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	0.54	0.63	0.56	<500	<250	<25
sec-Butylbenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Styrene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
tert-Butylbenzene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Tetrachloroethene	µg/L	5		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
trans-1,2-Dichloroethene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
trans-1,3-Dichloropropene	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Trichloroethene	µg/L	5		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Trichlorofluoromethane	µg/L	NE		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Vinyl chloride	µg/L	0.2		<50	<5	<100	<50	<500	<5	<5	<0.5	<0.5	<0.5	<500	<250	<25
Dissolved Lead[5]	µg/L	15		<1					<1					<1		
Lead[6]	µg/L	15		<1	<1				<1	<1				<1		

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-6 MW-6-080610 08/06/10	MW-6 MW-6-111010 11/11/10	MW-6 MW-6-021711 02/17/11	MW-6 MW-6-051111 05/11/11	MW-6 MW-6-080311 08/03/11	MW-7 MW-7-080610 08/06/10	MW-7 MW-7-111010 11/11/10	MW-7 MW-7-021611 02/16/11	MW-7 MW-7-051111 05/11/11	MW-7 MW-7-080311 08/03/11
DRPH[2]	µg/L	500		<100					<100				
ORPH[2]	µg/L	500		<500					<500				
GRPH [3]	µg/L	800		**76,400**	**16,600**	**15,600**	**6,850**	**21,900**	<100	<100	<100	<100	<100
Volatile Organic Compounds [4]													
Benzene	µg/L	5		**9,880**	**3,900**	**3,820**	**2,560**	**557**	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	700		**1,640**	**873 (u)[9]**	628	325	547	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	1,000		**14,400**	466 (u)[9]	262	642	**2,130**	<0.5	<0.5	<0.5	<0.5	<0.5
m,p-Xylene	µg/L	1,000[5]		**5,180**	**1410 (u)[9]**	**656**	530	**2,170**	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L			**2,720**	**1,280**	**1,250**	360	**1,680**	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	200		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	µg/L	NE		376	162	<100	62.8	237	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	µg/L	0.01		<250	<125	<100	<50	<50	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane (EDC)	µg/L	5		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	µg/L	NE		<250	193	<100	59.1	192	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2,2-Dichloropropane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2-Hexanone	µg/L	NE		<250	<625	<500	<250	<250	<2.5	<2.5	<2.5	<2.5	<2.5
4-Chlorotoluene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Acetone	µg/L	NE		<1,250	<625	<500	<250	<250	2.93	<2.5	<2.5	<2.5	<2.5
Acrylonitrile	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromochloromethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon disulfide	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-6					MW-7				
				MW-6-080610 08/06/10	MW-6-111010 11/11/10	MW-6-021711 02/17/11	MW-6-051111 05/11/11	MW-6-080311 08/03/11	MW-7-080610 08/06/10	MW-7-111010 11/11/10	MW-7-021611 02/16/11	MW-7-051111 05/11/11	MW-7-080311 08/03/11
cis-1,3-Dichloropropene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	µg/L	NE		466	162	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone (MEK)	µg/L	NE		<1,250	<625	<500	<250	<250	<2.5	<2.5	<2.5	<2.5	<2.5
Methyl isobutyl ketone (MIBK)	µg/L	NE		<1,250	<625	<500	<250	<250	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride	µg/L	5		<1,250	<625	<500	<250	<250	<2.5	<2.5	<2.5	<2.5	<2.5
Methyl tert buytl ether (MTBE)	µg/L	20		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	µg/L	160		<250	**200**	147	59.0	97.7	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	µg/L	NE		312	144	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	5		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	µg/L	5		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	µg/L	NE		<250	<125	<100	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	µg/L	0.2		<250	<125	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5
Dissolved Lead[5]	µg/L	15		<1					<1				
Lead[5]	µg/L	15		<1	<1				<1	<1			

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-8				MW-9				MW-10			
				MW-8-080610 08/06/10	MW-8-111010 11/11/10	MW-8-021711 02/17/11	MW-8-080311 08/03/11	MW-9-111010 11/11/10	MW-9-021611 02/16/11	MW-9-051111 05/11/11	MW-9-080311 08/03/11	MW-10-111010 11/11/10	MW-10-021711 02/17/11	MW-10-051111 05/11/11	MW-10-080311 08/03/11
DRPH[2]	µg/L	500		<100											
ORPH[2]	µg/L	500		<500											
GRPH[3]	µg/L	800		**14,800**	**12,000**	**13,400**	**227,000**	<100	<100	<100	<100	<100	<100	<100	<100
Volatile Organic Compounds [4]															
Benzene	µg/L	5		**2,620**	**2,670**	**3,280**	**2,140**	0.50	<0.5	<0.5	<0.5	0.50	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	700		334	321	421	**6,740**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	1,000		**1,750**	**1360 (u)[9]**	**2,010**	**26,700**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m,p-Xylene	µg/L	1,000[5]		**902**	**756**	**1,490**	**27,200**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L			**403**	**187**	**548**	**12,100**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	200		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	µg/L	NE		186	112	191	3,560	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	µg/L	0.01		<25	<50	<50	<500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane (EDC)	µg/L	5		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	µg/L	NE		70.7	94.2	85.7	1,080	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,2-Dichloropropane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Hexanone	µg/L	NE		<125	<250	<250	<2500	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
4-Chlorotoluene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acetone	µg/L	NE		<125	<250	<250	<2500	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Acrylonitrile	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromochloromethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon disulfide	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	µg/L	NE		<25	<50	<50	<500	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-8				MW-9				MW-10			
				MW-8-080610 08/06/10	MW-8-111010 11/11/10	MW-8-021711 02/17/11	MW-8-080311 08/03/11	MW-9-111010 11/11/10	MW-9-021611 02/16/11	MW-9-051111 05/11/11	MW-9-080311 08/03/11	MW-10-111010 11/11/10	MW-10-021711 02/17/11	MW-10-051111 05/11/11	MW-10-080311 08/03/11
cis-1,3-Dichloropropene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone (MEK)	µg/L	NE		<125	<250	<250	<2500	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methyl isobutyl ketone (MIBK)	µg/L	NE		<125	<250	<250	<2500	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride	µg/L	5		<125	<250	<250	<2500	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methyl tert buytl ether (MTBE)	µg/L	20		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	0.60	0.59	<0.5	<0.5
Naphthalene	µg/L	160		<25	72.3	<50	**869**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	µg/L	NE		37.1	60.8	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	5		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	µg/L	5		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	µg/L	NE		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	µg/L	0.2		<25	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Lead[5]	µg/L	15		<1											
Lead[6]	µg/L	15		<1	<1			<1				<1			

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	MW-11 MW-11-111010 11/11/10	MW-11 MW-11-021711 02/17/11	MW-11 MW-11-050000 05/11/11	MW-11 MW-11-080311 08/03/11	MW-12 MW-12-111010 11/11/10	MW-12 MW-12-021711 02/17/11	MW-12 MW-12-051211 05/12/11	MW-12 MW-12-080311 08/03/11	MW-13 MW-13-080411 08/04/11	MW-14 MW-14-080411 08/04/11	MW-15 MW-15-080411 08/04/11
DRPH[2]	µg/L	500												
ORPH[2]	µg/L	500												
GRPH [3]	µg/L	800		<100	140	<100	<100	<100	126	<100	<100	771	<100	**1,660**
Volatile Organic Compounds [4]														
Benzene	µg/L	5		0.50	<0.5	<0.5	<0.5	0.50	<0.5	<0.5	<0.5	**7.98**	<0.5	**847**
Ethylbenzene	µg/L	700		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	31.0	<0.5	129
Toluene	µg/L	1,000		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.66	<0.5	29.8
m,p-Xylene	µg/L	1,000 [5]		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	77.9	<0.5	<25
o-Xylene	µg/L			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	73.8	<0.5	73.2
1,1,1,2-Tetrachloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,1,1-Trichloroethane	µg/L	200		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,1,2,2-Tetrachloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,1,2-Trichloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,1-Dichloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,1-Dichloroethene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,1-Dichloropropene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2,3-Trichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2,3-Trichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2,4-Trichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2,4-Trimethylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10.3	<0.5	<25
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2-Dibromoethane (EDB)	µg/L	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.5	<0.01	<25
1,2-Dichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2-Dichloroethane (EDC)	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,2-Dichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,3,5-Trimethylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	35.8	<0.5	27.0
1,3-Dichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,3-Dichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
1,4-Dichlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
2,2-Dichloropropane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
2-Chlorotoluene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
2-Hexanone	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<125
4-Chlorotoluene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Acetone	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<125
Acrylonitrile	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Bromobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Bromochloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Bromodichloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Bromoform	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Bromomethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Carbon disulfide	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Carbon Tetrachloride	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Chlorobenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Chloroethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Chloroform	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Chloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
cis-1,2-Dichloroethene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25

Analyte	Unit	MTCA Method A Cleanup Level	Well No.	MW-11				MW-12				MW-13	MW-14	MW-15
			Sample Number	MW-11-111010	MW-11-021711	MW-11-050000	MW-11-080311	MW-12-111010	MW-12-021711	MW-12-051211	MW-12-080311	MW-13-080411	MW-14-080411	MW-15-080411
			Date	11/11/10	02/17/11	05/11/11	08/03/11	11/11/10	02/17/11	05/12/11	08/03/11	08/04/11	08/04/11	08/04/11
cis-1,3-Dichloropropene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Dibromochloromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Dibromomethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Dichlorodifluoromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Hexachlorobutadiene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Isopropylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.61	<0.5	<25
Methyl ethyl ketone (MEK)	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<125
Methyl isobutyl ketone (MIBK)	µg/L	NE		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<125
Methylene chloride	µg/L	5		<2.5	<2.5	<2.5	<2.5	<2.5	0.72	<2.5	<2.5	<2.5	<2.5	<125
Methyl tert buytl ether (MTBE)	µg/L	20		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Naphthalene	µg/L	160		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16.5	<0.5	41.9
n-Butylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.05	<0.5	<25
n-Propylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.28	<0.5	<25
p-Isopropyltoluene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.14	<0.5	<25
sec-Butylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Styrene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
tert-Butylbenzene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Tetrachloroethene	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
trans-1,2-Dichloroethene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
trans-1,3-Dichloropropene	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Trichloroethene	µg/L	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Trichlorofluoromethane	µg/L	NE		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Vinyl chloride	µg/L	0.2		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25
Dissolved Lead[5]	µg/L	15												
Lead[6]	µg/L	15		<1				<1						

Analyte	Unit	MTCA Method A Cleanup Level	Well No. Sample Number Date	Cabin Well					Duplicate-1 (MW-4)	Duplicate-1 (MW-6)	Duplicate-1 (MW-4)	Duplicate-1 (MW-4)	Duplicate-1 (MW-4)
				Cabin Well-080610 08/06/10	101209043-001 12/08/10	110221034-014 02/21/11	110513012-012 05/12/11	Cabin Grill-080411 08/04/11	80610 08/06/10	10112036-013 11/11/10	110221034-013 02/17/11	110513012-011 05/12/11	110805029-016 08/04/11
DRPH[2]	µg/L	500		<100					<100				
ORPH[2]	µg/L	500		<500					<500				
GRPH [3]	µg/L	800		**40,000**	**26,100**	**21,500**	**14,000**	**45,500**	**4,920**	**10,800**	476	467	708
Volatile Organic Compounds [4]													
Benzene	µg/L	5		**770**	**227**	**440**	**540**	**143**	**21.6**	**4,530**	1.98 (J)[7,8]	1.09	3.57
Ethylbenzene	µg/L	700		**877**	592	517	414	**997**	81.5	258	2.00 (J)[7,8]	1.62	9.67
Toluene	µg/L	1,000		**4,920**	**3,640**	**2,210**	982	**5,440**	472	430 (u)[9]	18.7 (J)[7,8]	7.97	41.8
m,p-Xylene	µg/L	1,000[5]		**2,600**	**1,930**	**1,710**	**985**	**5,140**	419	**1,570**	24.3 [7]	27.5	75.7
o-Xylene	µg/L			**1,390**	**1,090**	**1,080**	**687**	**2,570**	194	**1,650**	21.1 [7]	28.2	63.7
1,1,1,2-Tetrachloroethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	200		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,1-Dichloroethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,1-Dichloropropene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	µg/L	NE		369	289	216	99	967	148	<50	1.61	14.2	18.7
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	µg/L	0.01		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.01	<0.5
1,2-Dichlorobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,2-Dichloroethane (EDC)	µg/L	5		<50	<0.5	<50	<25	<100	<5	**116**	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	µg/L	NE		199	192	159	107	433	65.0	72.9	8.05	8.88	10.7
1,3-Dichlorobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,3-Dichloropropane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
2,2-Dichloropropane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
2-Chlorotoluene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
2-Hexanone	µg/L	NE		<250	<2.5	<250	<125	<500	<2.5	<250	<2.5	<2.5	<2.5
4-Chlorotoluene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Acetone	µg/L	NE		<250	9.7	<250	<125	<500	34.8	<250	<2.5	<2.5	<2.5
Acrylonitrile	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Bromobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Bromochloromethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Bromoform	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Bromomethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Carbon disulfide	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Carbon Tetrachloride	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Chloroethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Chloroform	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Chloromethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5

Analyte	Unit	MTCA Method A Cleanup Level	Well No. / Sample Number / Date	Cabin Well-080610 08/06/10	101209043-001 12/08/10	110221034-014 02/21/11	110513012-012 05/12/11	Cabin Grill-080411 08/04/11	Duplicate-1 (MW-4) 80610 08/06/10	Duplicate-1 (MW-6) 10112036-013 11/11/10	Duplicate-1 (MW-4) 110221034-013 02/17/11	Duplicate-1 (MW-4) 110513012-011 05/12/11	Duplicate-1 (MW-4) 110805029-016 08/04/11
cis-1,3-Dichloropropene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Dibromomethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Dichlorodifluoromethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Hexachlorobutadiene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Isopropylbenzene	µg/L	NE		<50	29.9	<50	<25	<100	6.12	<50	<0.5	<0.5	<0.5
Methyl ethyl ketone (MEK)	µg/L	NE		<250	4.73	<250	<125	<500	<2.5	<250	<2.5	<2.5	<2.5
Methyl isobutyl ketone (MIBK)	µg/L	NE		<250	<2.5	<250	<125	<500	<2.5	<250	<2.5	<2.5	<2.5
Methylene chloride	µg/L	5		<250	<2.5	<250	<125	<500	<2.5	<250	<2.5	<2.5	<2.5
Methyl tert buytl ether (MTBE)	µg/L	20		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.6
Naphthalene	µg/L	160		147	410	92.8	92.3	**244**	7.54	50.7	1.12 (J)[7,8]	0.75	1.06
n-Butylbenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	0.60
n-Propylbenzene	µg/L	NE		88.1	70	<50	43.9	116	14.7	<50	<0.5	<0.5	0.50
p-Isopropyltoluene	µg/L	NE		<50	2.59	<50	<25	<100	<5	<50	<0.5	0.60	0.51
sec-Butylbenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Styrene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
tert-Butylbenzene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	5		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Trichloroethene	µg/L	5		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Trichlorofluoromethane	µg/L	NE		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Vinyl chloride	µg/L	0.2		<50	<0.5	<50	<25	<100	<5	<50	<0.5	<0.5	<0.5
Dissolved Lead[5]	µg/L	15		<1	<0.5				<1				
Lead[6]	µg/L	15		<1	<1				<1	<1			

Notes:

[1]Chemical analyses conducted by Anatek Labs, Inc. located in Spokane, Washington.

[2]Diesel and Lube Oil analyzed using Northwest Method NWTPH-Dx.

[3]Gasoline analyzed using Northwest Method NWTPH-Gx.

[4]Volatile organic compounds analyzed using by EPA Methods 8260B/8260C.

[5]Cleanup level for total xylenes is 1,000 µg/L.

[6]Lead and dissolved lead analyzed using by EPA Method 200.8. Note that laboratory reports are in units of mg/L and are converted to µg/L in this table.

[7] VOC results reported from RBCA volatiles list due to discrepancy between the RBCA volatiles list and the full 8260C list. Reported result is the higher of the two reported values.

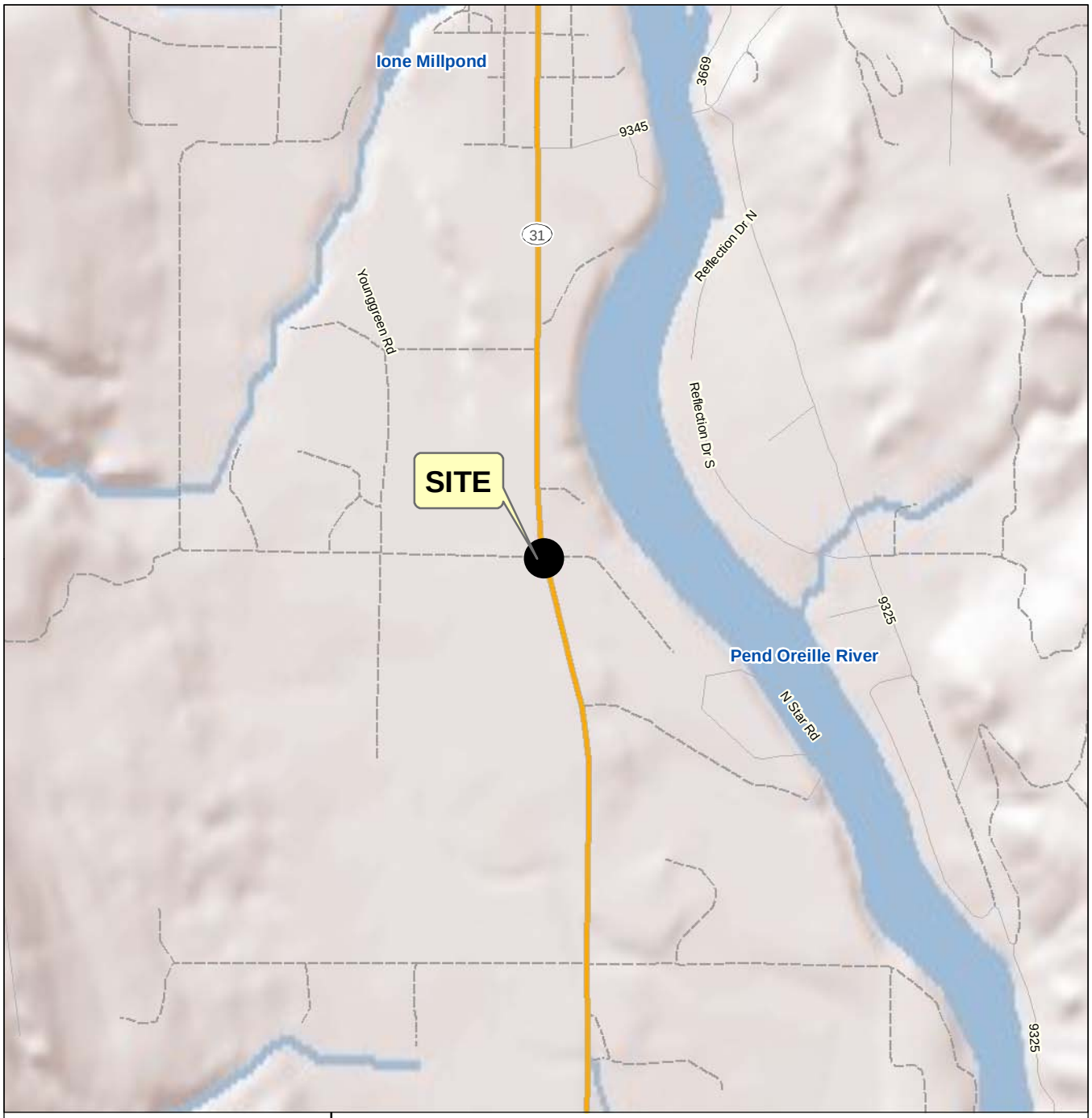
[8](J) Flag qualifier indicates an estimated value. See Appendix B Data Quality Assessment Summary.

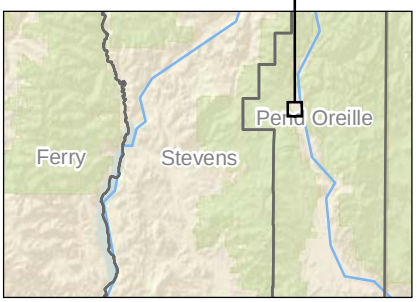
µg/L - micrograms per liter; mg/L = milligrams per liter; NE = not established; MTCA = Model Toxics Control Act

http://projects/sites/0050405801/Final/[Ione GW Monitoring Tables Q5.xlsx]Table 3

FIGURES

GeoEngineers





N
W E
S

2,000 0 2,000
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
Data Sources: ESRI Data & Maps, Street Maps 2008.
Projection: NAD 1983, UTM Zone 11 North.

Vicinity Map

Ione Petroleum Contamination
Ione, Washington

GeoEngineers

Figure 1

Map Revised: 09/09/2010 CRC

Office: SPO Path:W:\Spokane\Projects\0\0504058\GIS\0504058GIS_VM_F1.mxd

Well Number	GRPH (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Total Xylenes (µg/L)
MW-1	<100	<0.5	<0.5	<0.5	<1.0
MW-2	<100	<0.5	<0.5	<0.5	<1.0
MW-3	**74,700**	**5,470**	**1700**	**16,200**	**9,990**
MW-4	687	3.85	9.36	45.5	138.4
MW-5	NA	NA	NA	NA	NA
MW-6	**21,900**	**557**	547	**2,130**	**3,850**
MW-7	<100	<0.5	<0.5	<0.5	<1.0
MW-8	**227,000**	**2,140**	**6,740**	**26,700**	**39,300**
MW-9	<100	<0.5	<0.5	<0.5	<1.0
MW-10	<100	<0.5	<0.5	<0.5	<1.0
MW-11	<100	<0.5	<0.5	<0.5	<1.0
MW-12	<100	<0.5	<0.5	<0.5	<1.0
MW-13	771	**7.98**	31.0	2.66	151.7
MW-14	<100	<0.5	<0.5	<0.5	<1.0
MW-15	**1,660**	**847**	129	29.8	73.2
Cabin Grill Well	**45,500**	**143**	**997**	**5,440**	**7,710**

Bold = Exceeded cleanup level

NA = Not Analyzed

Legend

- MW-1 — Approximate Location of Monitoring Well and Groundwater Elevation on August 2, 2011
- Approximate Location of Direct-Push Boring
- 2077 — Approximate Groundwater Elevation Contour (0.5-Foot Interval)
- Interpreted Groundwater Flow Direction

Reference: Bing Maps aerial from ESRI, Online Data Resource Center.
ESRI Data & Maps, Street Maps 2008

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Elevations are referenced in NAVD 88.
4. The equivalent (true) groundwater elevation at MW-5 and MW-8 as showing calculated to account for the presence of the free product using the following equation: GW = SG X T + IE; where GW = equivalent groundwater elevation SG = specific gravity of free product (0.75) for gasoline; T = thickness of product measured in well using oil/water interface probe; IE =elevation of water/product interface measured in the well.
5. NA = Not Analyzed

N W E S

100 0 100
Feet

Groundwater Elevations and Flow Direction - August 2011

Ione Petroleum Contamination
Ione, Washington

GeoEngineers

Figure 2

Map Revised: August 22, 2011 CRC

Path:W:\Spokane\Projects\0\05040058\GIS\05040058_GWContour_F2_Aug2011.mxd

OfficeLocation: SPO

Legend

- DP-1 — Direct-Push Boring Number and Approximate Location
- B-1 — Hollow-Stem Auger Boring Number and Approximate Location
- MW-1 — Monitoring Well Number and Approximate Location
- (W) — Existing Water Well
- GRPH Detected in Soil Samples at Concentrations Greater Than MTCA Method A Cleanup Levels.
- BTEX Detected in Soil Samples at Concentrations Greater Than MTCA Method A Cleanup Levels.

Reference: Bing Maps aerial from ESRI, Online Data Resource Center.
ESRI Data & Maps, Street Maps 2008

N W E S

150 0 150
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

GRPH and BTEX in Soil Samples

Ione Petroleum Contamination
Ione, Washington

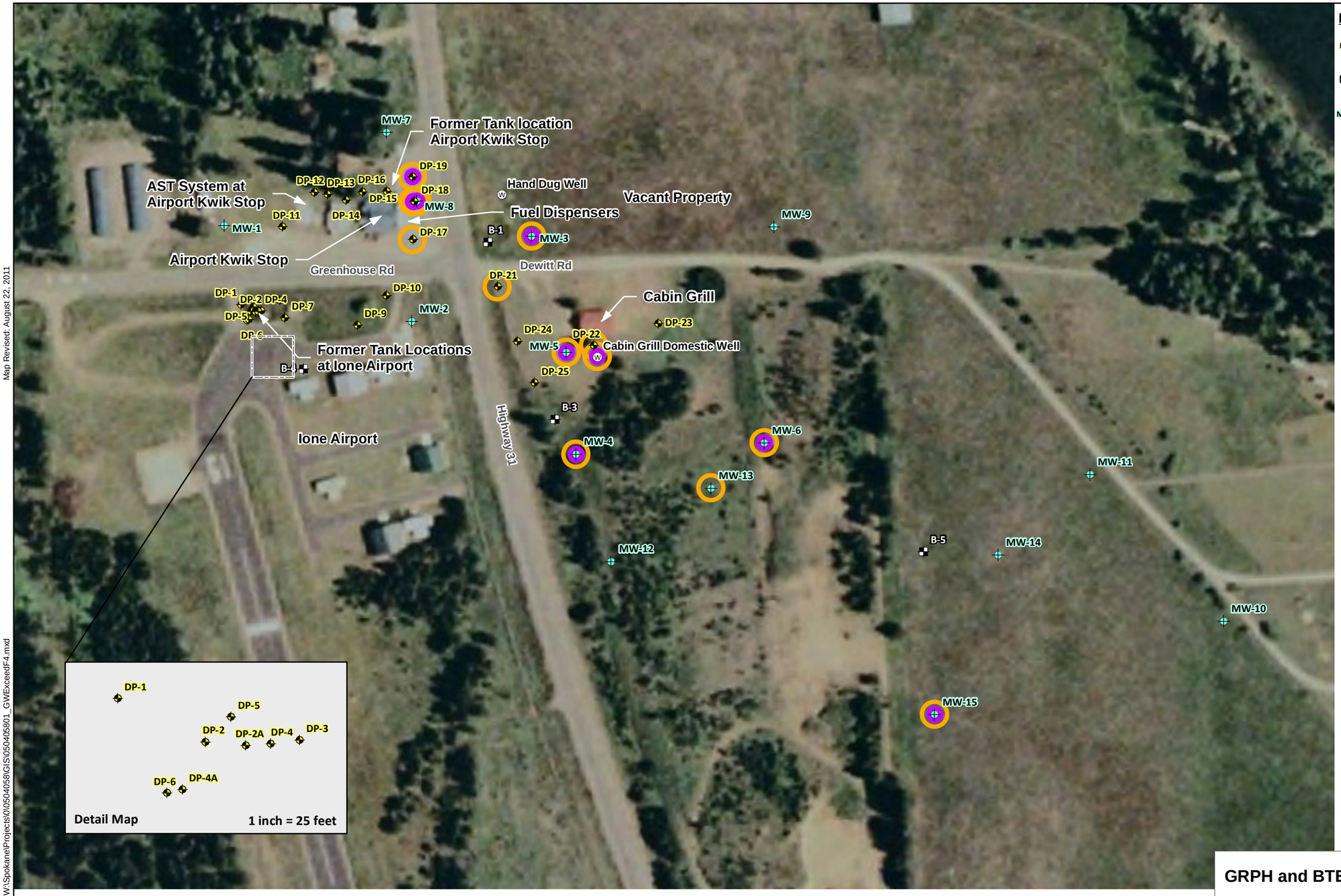
GeoEngineers

Figure 3

Map Revised: August 22, 2011

Path:W:\SpokaneProjects\0\05040581GIS\05040581_SoilExceed_F3.mxd

OfficeLocation: SPO



Legend

- DP-1 — Approximate Location of Direct-Push Boring
- B-1 — Approximate Location of Exploration
- MW-1 — Approximate Location of Monitoring Well
- Ⓦ — Existing Water Well
- GRPH Detected in Groundwater Samples at Concentrations Greater Than MTCA Method A Cleanup Levels.
- BTEX Detected in Groundwater Samples at Concentrations Greater Than MTCA Method A Cleanup Levels.

Reference: Bing Maps aerial from ESRI, Online Data Resource Center.
ESRI Data & Maps, Street Maps 2008

N
W E
S

150 0 150
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

GRPH and BTEX in Groundwater Samples

Ione Petroleum Contamination
Ione, Washington

GeoEngineers

Figure 4

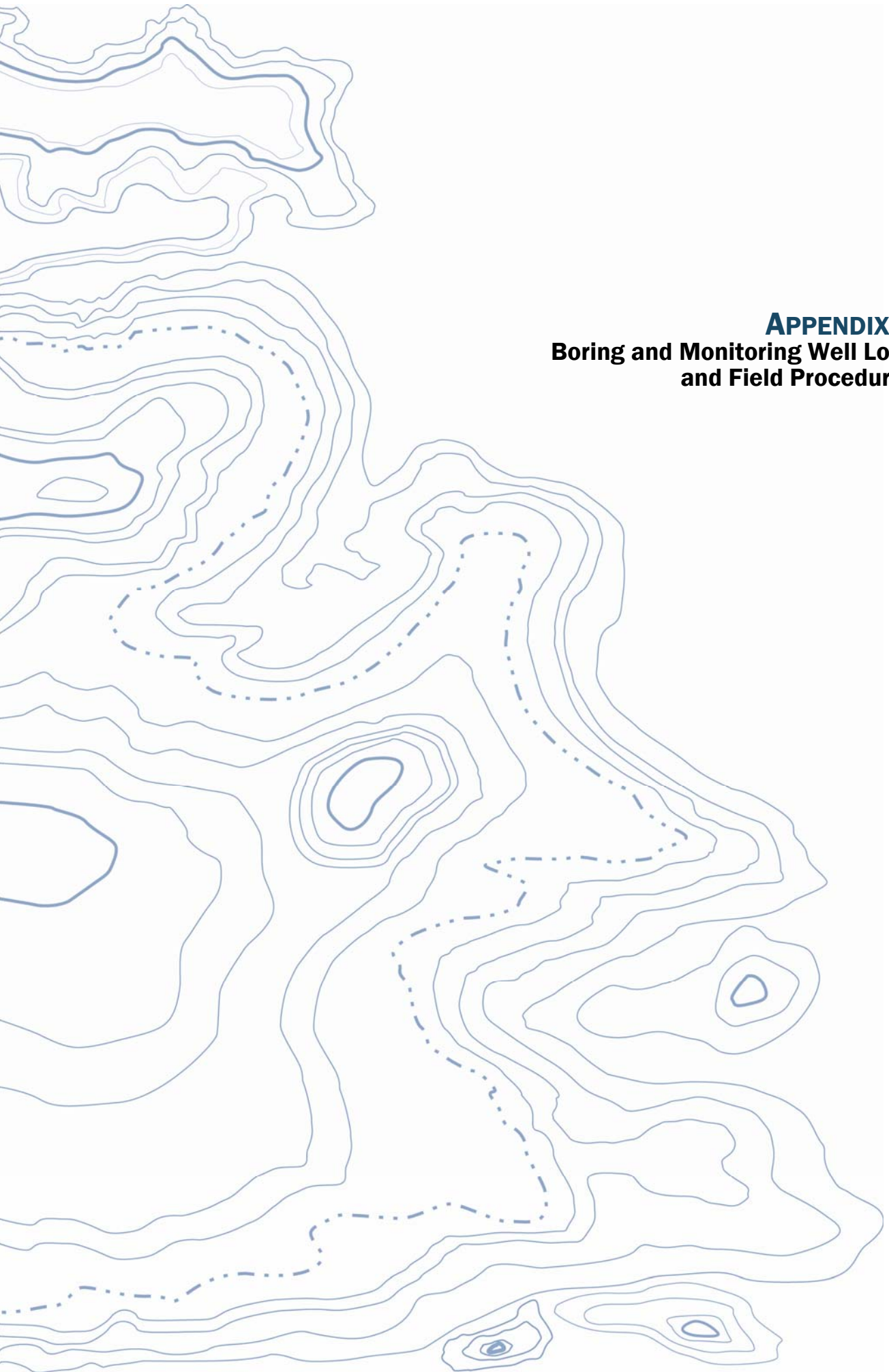
Map Revised: August 22, 2011

Path:W:\Spokane\Projects\0105040581GIS\0504058801_GWExceedF4.mxd

OfficeLocation: SPO

APPENDICES

GeoEngineers



APPENDIX A
Boring and Monitoring Well Logs and Field Procedures

APPENDIX A
BORING AND MONITORING WELL LOGS AND FIELD PROCEDURES

Field Explorations

GeoEngineers contacted the One-Call Utility Notification Center, in accordance with Washington State law, and the Pend Oreille County Public Utility District (PUD) before drilling.

Following clearance of utilities, subsurface conditions at the Site were explored from July 26 through 27, 2011 by:

- Advancing three borings and collecting soil samples;
- Installing three new monitoring wells in the borings.

The approximate exploration locations are shown in Figure 2.

Soil Sampling from Borings

Soil borings were completed using hollow-stem auger (HSA) drilling techniques by a licensed driller. Subsurface soil samples were obtained using standard penetration test (SPT) samplers.

Each boring was continuously monitored by a geologist from our firm who observed and classified the soil encountered, and prepared a detailed log of each boring. Soil encountered in the borings was classified in the field in general accordance with ASTM International (ASTM) D-2488, the Standard Practice for Classification of Soils, Visual-Manual Procedure, which is summarized in Figure A-1. Preservation of VOC samples was completed in accordance with Ecology Memo 5, document number 04-09-087. Sample containers were labeled and placed into an ice chest containing ice/ice packs. Soil samples for VOCs analyses were obtained consistent with EPA Method 5035A. Chain-of-custody procedures were followed during transport of the soil samples.

Sampling equipment was decontaminated between each sampling attempt for either drilling method. Samples were obtained using either a decontaminated soil knife or new, clean nitrile glove and placed into 4-ounce glass sample jars with Teflon lids and preserved volatile organic analysis (VOA) vials.

Samples were placed in a cooler with ice and delivered to the analytical laboratory; standard chain-of-custody procedures were observed during transport of the samples to the laboratory.

Field Screening Methods

A GeoEngineers field geologist performed field screening tests on selected soil samples from the explorations. Field screening results were used to aid in the selection of soil samples for chemical analysis. Screening methods included (1) visual examination; (2) water sheen screening; and (3) headspace vapor screening using a photo-ionization detector (PID).

Monitoring Well Construction, Development, and Surveying

Monitoring wells MW-13 through MW-15 were constructed in accordance with WAC 173-160, Section 400, Washington State Resource Protection Well Construction Standards. Monitoring well installation was observed by a GeoEngineers field geologist, who maintained a detailed log of the materials and depths of the well. Well construction details, including the depths of the well screen and filter packs are shown on Logs of Monitoring Wells, Figures A-2 through A-4.

The three monitoring wells were constructed using 2-inch-diameter polyvinyl chloride (PVC) well casing. The annular space in each well was sealed between the top of the filter pack and the ground surface with bentonite to prevent infiltration of groundwater into the well bore from shallower zones. A lockable compression-type cap was installed in the top of the PVC well casing. A flush-mount monument equipped with a watertight cover was installed to protect the PVC well casing. A concrete surface seal was placed around the monument at the ground surface to divert surface water away from the well location.

Monitoring wells MW-13 through MW-15 were developed on July 28, 2011 to remove water introduced into the well during drilling, stabilize the filter pack and formation materials surrounding the well screen, and restore the hydraulic connection between the well screen and the surrounding soil. Each well screen was gently surged and water was removed with a surge block and disposable bailer several times during the development process.

The elevation of the top of each monitoring well casing and the ground surface of each well was surveyed by Thomas Dean and Hoskins Inc., on August 12, 2011. A survey reference notch was established on the north side of each monitoring well casing. Horizontal locations of wells are referenced to the NAD83 datum. Elevations are referenced to NAVD88 datum.

Decontamination Procedures

The objective of the decontamination procedure is to minimize the potential for cross-contamination between sample locations.

A designated decontamination area was established for decontamination of drilling equipment and reusable sampling equipment. Drilling equipment was cleaned using high-pressure/low-volume cleaning equipment.

Sampling equipment was decontaminated in accordance with the following procedures before each sampling attempt or measurement.

1. Brush equipment with a nylon brush to remove large particulate matter.
2. Rinse with potable tap water.
3. Wash with non-phosphate detergent solution (Liquinox® and potable tap water).
4. Rinse with potable tap water.
5. Rinse with distilled water.

Handling of Investigation-Derived Waste

Investigation Derived Waste (IDW), which consists of mainly drill cuttings and decontamination/purge water, typically was placed in DOT-approved 55-gallon drums. Each drum was labeled with the project name, exploration number, general contents, and date. The drummed IDW was stored onsite pending analysis and disposal.

Disposable items, such as sample tubing, disposable bailers, bailer line, gloves and protective overalls, paper towels, etc., were placed in plastic bags after use and deposited in trash receptacles for disposal.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	CC	Cement Concrete
	AC	Asphalt Concrete
	CR	Crushed Rock/ Quarry Spalls
	TS	Topsoil/ Forest Duff/Sod

Measured groundwater level in exploration, well, or piezometer

Groundwater observed at time of exploration

Perched water observed at time of exploration

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Material Description Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

Laboratory / Field Tests

%F	Percent fines
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
OC	Organic content
PM	Permeability or hydraulic conductivity
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
NT	Not Tested

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

KEY TO EXPLORATION LOGS

GeoEngineers

FIGURE A-1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	7/26/2011	7/26/2011	48.5	KBR	DRL	GeoEngineers, Inc.	Hollow-Stem Auger

Hammer Data	Automatic 140 (lbs) / 30 (in) Drop	Drilling Equipment	CME 75
Surface Elevation (ft) Vertical Datum	2109.5 NAVD88	Top of Casing Elevation (ft)	2109.1
Easting (X) Northing (Y)	2466514.8838 643370.4753	Horizontal Datum	State Plane, Washington North Zone, NAD83

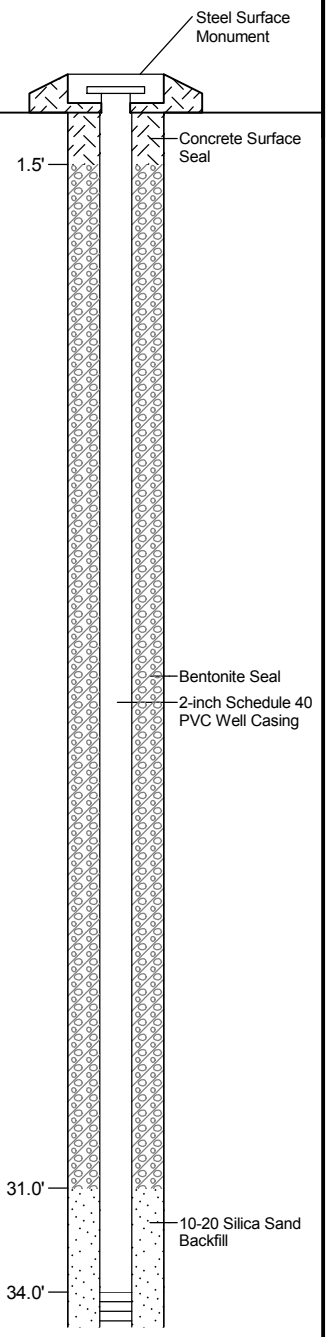
A 2 (in) well was installed on 7/26/2011 to a depth of 45 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
8/2/2011	36.8	2072.32

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
2105	5										
2100	10										
2095	15										
2090	20							SP	Brown fine to medium sand with trace silt (loose to medium dense, moist)		
2085	25										
2080	30	13	18		1					NS	0.0
2075	35	14	11		2 CA				MW-13 (33.5)	NS	0.0

WELL LOG



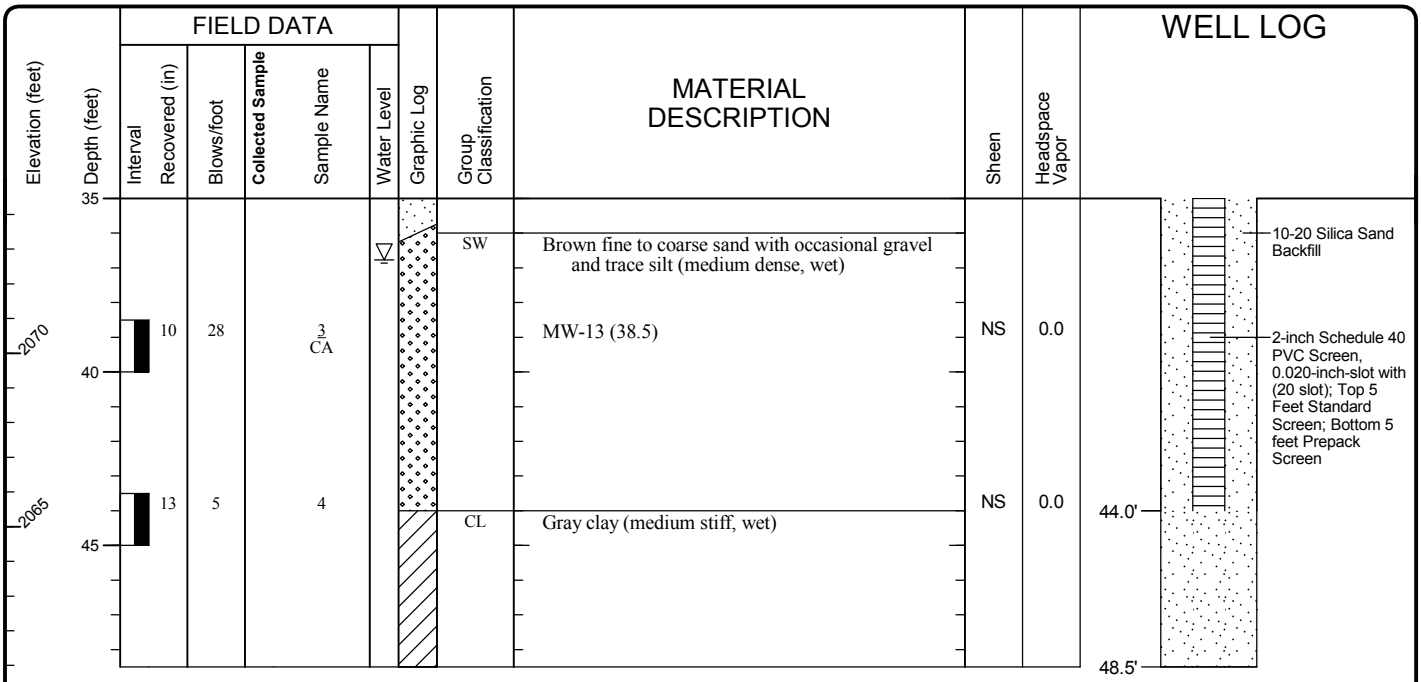
Notes: Please refer to Figure A-1 for an explanation of symbols.

Log of Monitoring Well MW-13

GeoEngineers

Project: Ione Petroleum Contamination
Project Location: Ione, Washington
Project Number: 0504-058-01

Figure A-2
Sheet 1 of 2



Notes: Please refer to Figure A-1 for an explanation of symbols.

Log of Monitoring Well MW-13 (continued)

GeoEngineers

Project: Ione Petroleum Contamination
Project Location: Ione, Washington
Project Number: 0504-058-01

Figure A-2
Sheet 2 of 2

Drilled: Start 7/26/2011 End 7/26/2011	Total Depth (ft): 40	Logged By: KBR Checked By: DRL	Driller: GeoEngineers, Inc.	Drilling Method: Hollow-Stem Auger	
Hammer Data: Automatic 140 (lbs) / 30 (in) Drop		Drilling Equipment: CME 75			
Surface Elevation (ft) Vertical Datum: 2103.5 NAVD88		Top of Casing Elevation (ft): 2103.2			
Easting (X) Northing (Y): 2466941.5168 643271.3594		Horizontal Datum: State Plane, Washington North Zone, NAD83			

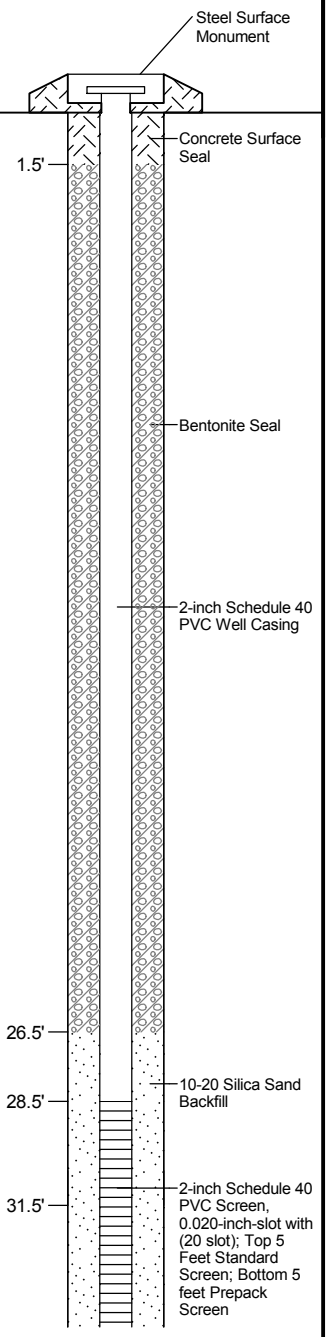
A 2 (in) well was installed on 7/26/2011 to a depth of 40 (ft).

Groundwater	Depth to Water (ft)	Elevation (ft)
Date Measured		
8/2/2011	31.6	2071.55

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
2100	0										
	5										
2095											
	10										
2090											
	15										
2085											
	20							SP	Brown fine to medium sand with occasional gravel and trace silt (loose to medium dense, moist)		
2080		15	16		1					NS	0.0
	25										
2075		14	12		2 CA				MW-14 (28.5)	NS	0.0
	30							SW	Brown fine to coarse sand with occasional gravel and trace silt (medium dense, wet)		
2070		12	15		3 CA				MW-14 (33.5)	NS	0.0
	35										

WELL LOG



Notes: Please refer to Figure A-1 for an explanation of symbols.

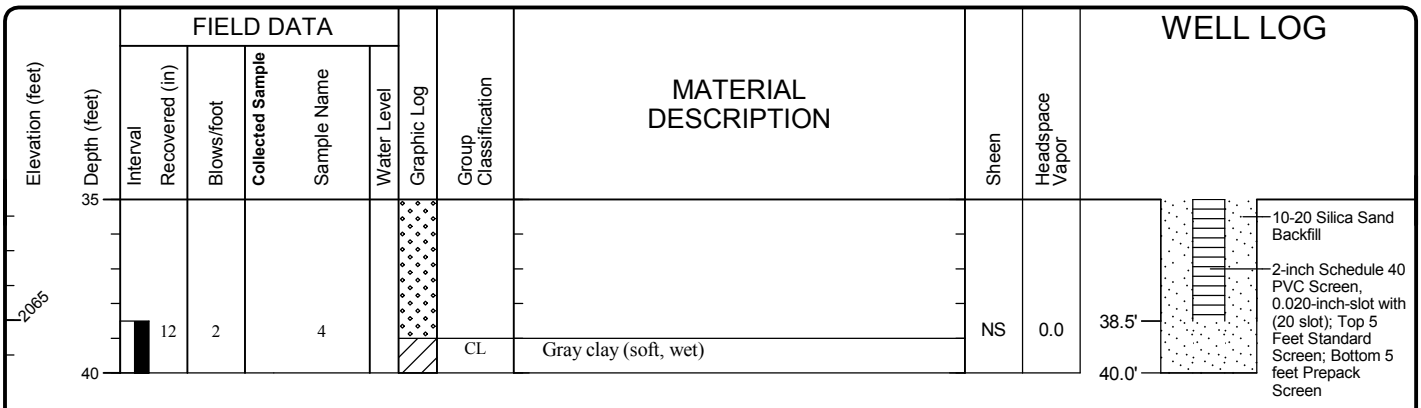
Log of Monitoring Well MW-14

GeoEngineers

Project: Ione Petroleum Contamination
Project Location: Ione, Washington
Project Number: 0504-058-01

Figure A-3
Sheet 1 of 2

Spokane: Date:8/23/11 Path:P:\0\0504058\01\GINT\050405801.GPJ DBTemplate/LibTemplate/GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL



Notes: Please refer to Figure A-1 for an explanation of symbols.

Log of Monitoring Well MW-14 (continued)

GeoEngineers

Project: Ione Petroleum Contamination
Project Location: Ione, Washington
Project Number: 0504-058-01

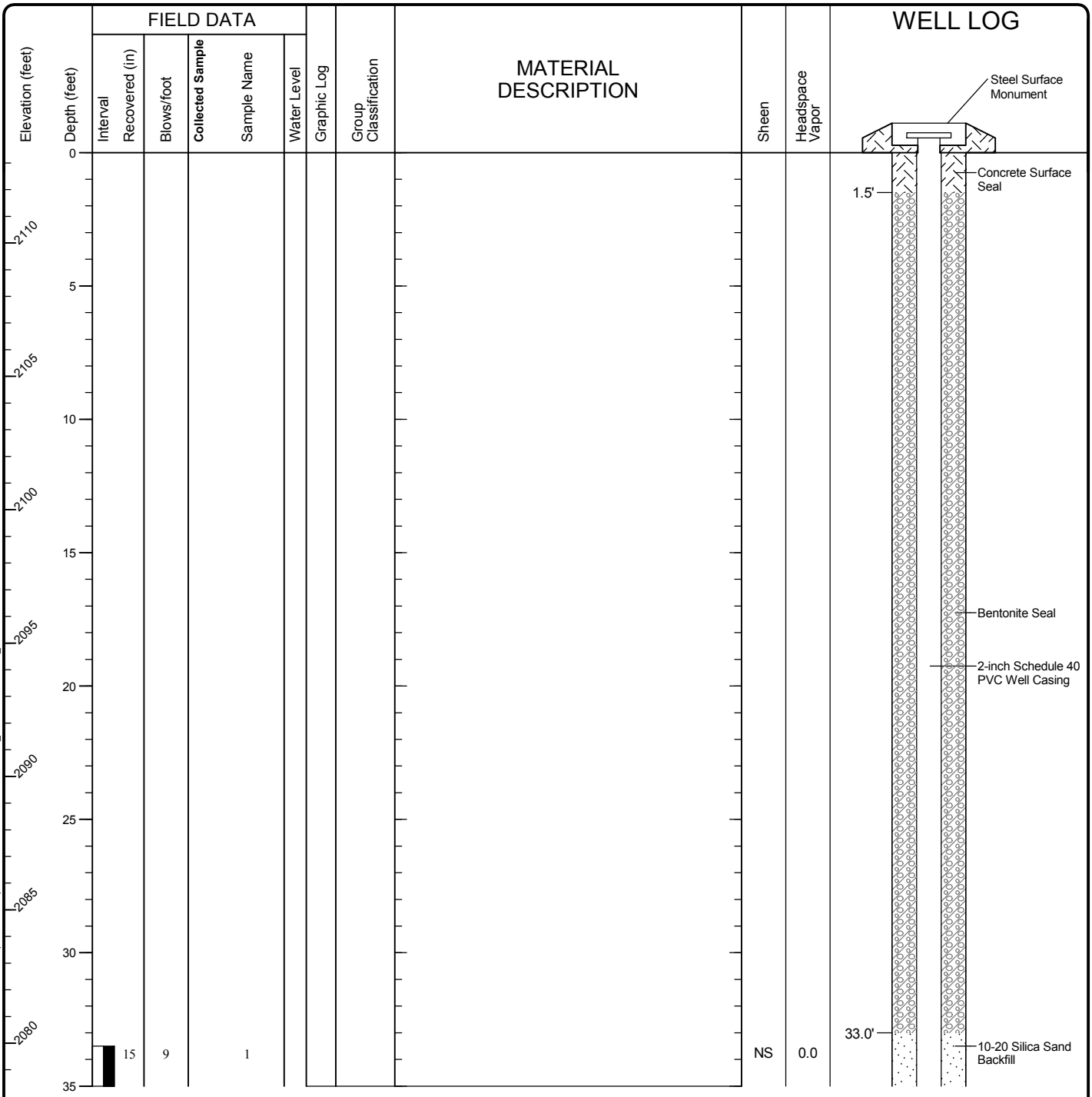
Figure A-3
Sheet 2 of 2

Drilled: Start 7/27/2011 End 7/27/2011	Total Depth (ft): 50	Logged By: KBR Checked By: DRL	Driller: GeoEngineers, Inc.	Drilling Method: Hollow-Stem Auger	
Hammer Data: Automatic 140 (lbs) / 30 (in) Drop		Drilling Equipment: CME 75			
Surface Elevation (ft) Vertical Datum: 2113.4 NAVD88		Top of Casing Elevation (ft): 2112.9			
Easting (X) Northing (Y): 2466847.128 643034.0853		Horizontal Datum: State Plane, Washington North Zone, NAD83			

A 2 (in) well was installed on 7/27/2011 to a depth of 50 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
8/2/2011	41.6	2071.34

Notes:



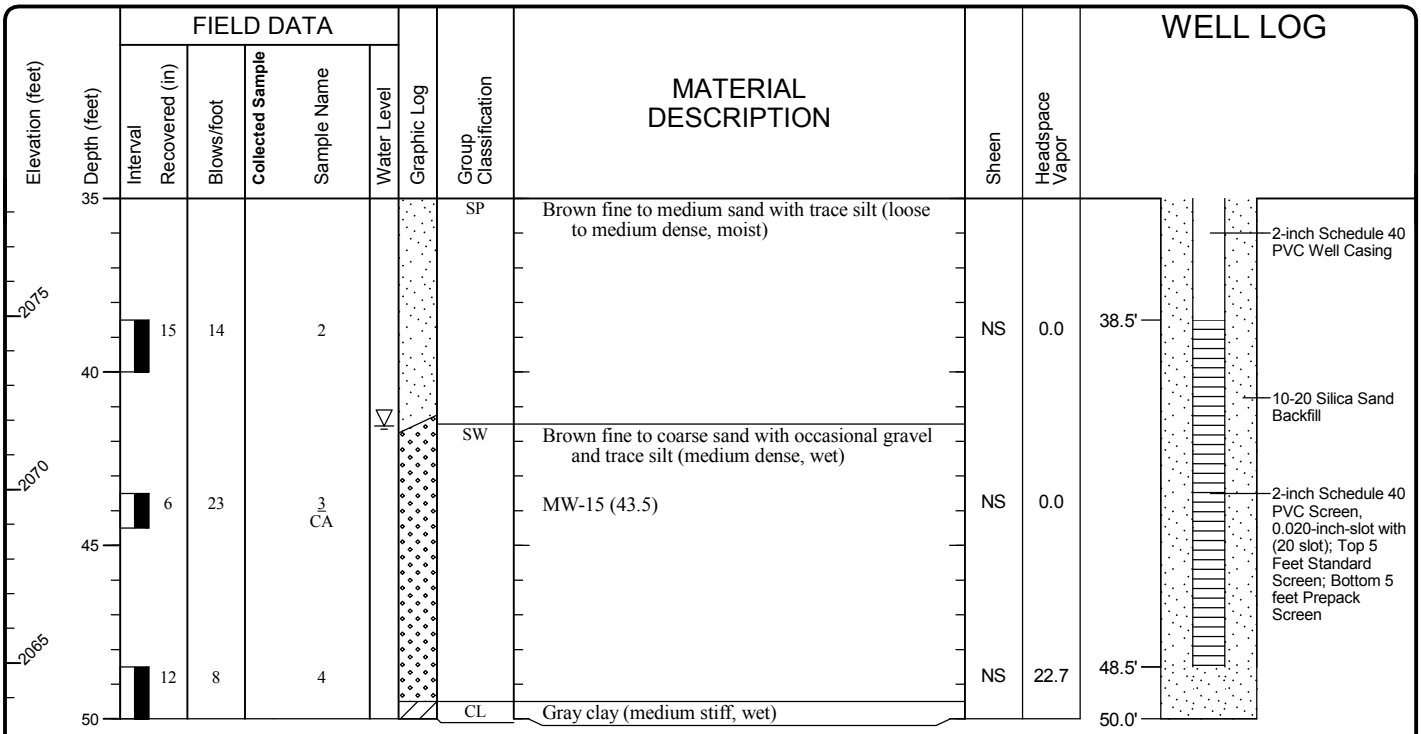
Notes: Please refer to Figure A-1 for an explanation of symbols.

Log of Monitoring Well MW-15

GeoEngineers

Project: Ione Petroleum Contamination
Project Location: Ione, Washington
Project Number: 0504-058-01

Figure A-4
Sheet 1 of 2



Notes: Please refer to Figure A-1 for an explanation of symbols.

Log of Monitoring Well MW-15 (continued)

GeoEngineers

Project: Ione Petroleum Contamination
Project Location: Ione, Washington
Project Number: 0504-058-01

Figure A-4
Sheet 2 of 2

APPENDIX B
Groundwater Monitoring Field Procedures

APPENDIX B
GROUNDWATER MONITORING FIELD PROCEDURES

General

The sampling methods used by GeoEngineers during the August 2011 sampling event generally conformed to the work plan dated April 9, 2010.

Groundwater Elevations

GeoEngineers measured depth to groundwater relative to the monitoring well casing rims on August 2, 2011 using an electric water level indicator. Product and groundwater depths at the location of monitoring wells MW-5 and MW-8 were measured using an oil-water interface probe; measurement of free product thickness (if present) was also conducted using disposable bailers at the locations of wells MW-3, MW-4, MW-5, MW-6, MW-8 and MW-15. The probe of the water level indicator was decontaminated between wells. Groundwater elevations were calculated by subtracting the depth to the water table from the casing rim elevations. Groundwater elevations measured on August 2, 2011 are presented in Table 1 and Figure 2. The equivalent groundwater elevation at the location of MW-5 was calculated using the measurements of the top of the free product and the groundwater table obtained from the interface probe and the equation presented in the **Fluid Elevations** section of this report. A specific gravity of 0.75 (approximate specific gravity of gasoline) was used in the calculation.

Groundwater Sampling

GeoEngineers obtained groundwater samples for chemical analysis from monitoring wells MW-1 through MW-4 and MW-6 through MW-15 and the Cabin Grill domestic well on August 3 and 4, 2011.

Before sampling, VOCs in the well headspace were measured with a PID by first inserting the PID into the well casing and immediately after removal of the well cap. PID readings are posted in Table B-1. Measurement of free product was only performed at those well locations where PID measurements indicated the presence of VOCs greater than 10 ppm.

Groundwater purging and sampling conducted at the monitoring wells was performed consistent with the EPA's low-flow groundwater sampling procedure with the exception of well MW-8. A portable bladder pump was used for groundwater purging and sampling. During purging activities, water quality parameters, including pH, conductivity, temperature, turbidity, and oxidation-reduction potential, were measured using a Troll 9500 multi-parameter meter equipped with a flow-through cell. The meter was calibrated on a daily basis in a manner consistent with manufacturer procedures. Groundwater samples were collected once (1) water quality parameters were stabilized. Water quality parameter stabilization criteria include the following:

- Turbidity: ±10 percent for values greater than 5 NTU;
- Oxidation reduction potential: ±10 percent;
- Conductivity: ±3 percent;
- pH: ±0.1 unit; and

- Temperature: ±3 degrees.

Due to a dent within the casing of well MW-8, the portable pump could not be lowered into the well. Therefore, groundwater was sampled form MW-8 using a small-diameter (pencil) bailer. The well was not purged before collecting the sample. Additionally, turbidity was measured at a significantly higher level in well MW-4 than during previous sampling events.

Water quality parameters at the time of sampling are presented in Summary of Field Quality Parameters, Table B-1.

The groundwater samples were transferred in the field to laboratory-prepared containers and kept cool during transport to the testing laboratory. The sample containers were filled completely to eliminate headspace in the container. Chain-of-custody procedures were observed from the time of sample collection to delivery to the testing laboratory.

Quality control/quality assurance (QA/QC) samples collected during the August 2011 sampling event included a trip blank, and duplicate sample from monitoring well MW-4, labeled Duplicate-1.

Decontamination Procedures

The objective of the decontamination procedure is to minimize the potential for cross-contamination between sample locations. Sampling equipment was decontaminated in accordance with the work plan.

Table B-1

Summary of Field Quality Parameters

Ione Petroleum Contamination

Ione, Washington

Sample Number	Date Sampled	pH	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	ORP (mV)	Well Headspace PID Readings (ppm)
MW-1	08/05/10	7.36	319.1	1.01	6.99	14.82	95	0.0
	11/10/10	7.09	54.0	4.02	9.12	8.02	363	0.0
	02/16/11	6.75	58.2	10.0	10.53	8.17	268	0.0
	05/11/11	7.40	30.46	8.5	8.39	10.09	105	0.0
	08/03/11	7.28	31.1	9.8	8.30	8.85	239	0.0
MW-2	08/06/10	6.98	46.0	0.00	3.66	14.66	95	13.6
	11/10/10	6.62	67.7	0.00	4.24	9.15	373	0.0
	02/16/11	6.56	71.0	5.68	4.07	9.29	278	0.0
	05/11/11	7.01	35.52	12.09	5.54	11.67	82	0.0
	08/03/11	7.07	34.86	13.12	5.69	10.53	214	0.0
MW-3	08/06/10	6.76	717.3	0.09	0.02	15.16	-107	19.8
	11/10/10	6.45	101.0	0.00	0.00	9.27	-127	0.0
	02/16/11	6.30	57.8	7.34	0.00	8.98	-149	0.0
	05/12/11	6.70	69.91	13.68	0.14	10.32	-117	10.3
	08/04/11	6.66	78.01	6.40	0.48	10.45	-22	18.9
MW-4	08/06/10	7.50	356.0	4.38	0.17	14.88	-72	2,100
	11/10/10	6.95	81.1	0.00	2.66	8.97	196	575
	02/17/11	6.73	99.9	3.12	0.00	8.79	273	575
	05/12/11	7.07	43.26	36.75	0.86	9.55	57	1,212
	08/04/11	7.08	40.82	78.28	2.25	11.75	202	1,158
MW-5	08/06/10	6.85	606.4	0.00	NR	17.16	29	2,400
	11/10/10	6.61	92.3	0.00	0.00	9.50	108	4,800
	02/17/11	6.93	91.4	0.00	0.00	8.84	94	4,800
	05/10/11	NA	NA	NA	NA	NA	NA	1,657
	08/04/11	NA	NA	NA	NA	NA	NA	1,425
MW-6	08/05/10	6.74	757.9	16.70	0.49	14.97	-27	0.3
	11/10/10	6.52	100.0	0.00	0.00	9.14	-38	0.0
	02/17/11	6.37	109.0	8.57	0.00	8.90	-75	0.0
	05/12/11	6.83	62.09	17.19	0.67	9.76	-13	37.2
	08/04/11	6.96	61.46	16.26	1.46	10.39	-18	0.0
MW-7	08/06/10	7.36	329.8	6.39	1.13	14.01	-57	1.2
	11/10/10	6.83	60.1	9.21	0.00	8.11	-20	0.0

Sample Number	Date Sampled	pH	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	ORP (mV)	Well Headspace PID Readings (ppm)
MW-7 cont.	02/16/11	6.80	61.7	3.84	0.00	7.83	-14	0.0
	05/11/11	7.34	28.87	13.57	0.00	9.79	-39	0.0
	08/03/11	7.07	31.11	8.93	7.06	9.86	-39	0.0
MW-8	08/06/10	6.66	508.6	0.00	NR	14.96	24	2,150
	11/10/10	6.38	90.4	0.00	0.00	9.52	-8	1,280
	02/17/11	6.72	79.3	0.00	0.00	8.57	15	1,280
	05/10/11	NA	NA	NA	NA	NA	NA	1,570
	08/04/11	NA	NA	NA	NA	NA	NA	1,817
MW-9	11/10/10	7.15	55.4	8.16	7.53	8.37	244	0.0
	02/16/11	6.99	57.8	11.12	9.51	8.12	251	0.0
	05/11/11	7.50	26.68	26.44	8.11	9.95	36	0.0
	08/03/11	7.43	30.11	1.75	8.38	10.03	239	0.0
MW-10	11/10/10	7.08	69.9	4.12	1.44	8.95	48	0.0
	02/16/11	6.89	79.2	0.00	0.00	8.20	226	0.0
	05/11/11	7.33	23.28	12.30	8.82	8.61	35	0.0
	08/03/11	7.13	27.75	17.17	6.98	11.37	285	0.0
MW-11	11/10/10	7.19	55.9	0.00	7.94	8.86	236	0.0
	02/17/11	7.00	65.2	8.34	10.72	8.73	283	0.0
	05/11/11	7.46	26.43	29.57	8.92	9.64	55	0.0
	08/03/11	7.41	25.23	10.36	9.12	9.16	282	0.0
MW-12	11/10/10	7.06	76.0	0.00	8.03	8.82	242	0.9
	02/17/11	6.93	74.3	8.12	11.81	8.54	297	0.9
	05/12/11	7.27	32.62	14.7	7.96	7.2	128	4.7
	08/03/11	7.31	33.41	11.1	8.48	12.09	307	0.0
MW-13	08/04/11	7.00	47.94	15.46	2.43	10.36	124	0.0
MW-14	08/04/11	7.28	30.92	13.59	9.03	10.57	239	0.0
MW-15	08/04/11	6.95	44.92	18.10	6.03	10.61	219	11.2

Notes:

NA= not analyzed

NR = not reported due to instrument error - readings were outside normal range and therefore not reported.

http://projects/sites/0050405801/Final/[Ione GW Monitoring Tables Q5.xlsx]Table B-1

APPENDIX C
Laboratory Reports

APPENDIX C
LABORATORY REPORTS

DATA QUALITY ASSESSMENT SUMMARY
NWTPH-Gx,
VOLATILE ORGANIC COMPOUNDS (VOCs) BY EPA 8260C

Anatek Laboratory SDG	Samples Validated (Bold indicates the sample was qualified)
110801007 (soil samples)	**MW-13 (33.5)**, MW-13 (38.5), **MW-14 (28.5)**, MW-14 (33.5), MW-15 (43.5), **TRIP BLANK**
110805029 (water samples)	MW-1-080311, MW-2-080311, MW-3-080411, MW-4-080411, MW-6-080411, MW-7-080311, MW-8-080411, MW-9-080311, MW-10-080311, MW-11-080311, MW-12-080311, MW-13-080411, MW-14-080411, MW-15-080411, DUPLICATE-1-080311, CABIN GRILL-080411, TRIP BLANK

This report documents the results of an EPA level 2a data validation of analytical data from the analyses of water samples and the associated laboratory and field quality control (QC) samples. The review included the following:

- Chain of Custody
- Holding Times
- Surrogates
- Method and Trip Blanks
- Laboratory Control Samples
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory and Field Duplicates

I. DATA PACKAGE COMPLETENESS

Anatek Labs, Inc., located in Spokane, Washington, analyzed the samples evaluated as part of this data validation review. The laboratory provided all required deliverables for the validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and all identified anomalies were discussed in the case narrative.

The following sections discuss the data. Based on the review, qualification of the laboratory data was performed in association with trip blank contamination.

OBJECTIVE

The objective of the data validation was to review laboratory analytical procedures and quality control (QC) results to evaluate whether:

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

The environmental samples were analyzed by one or more of the analytical methods listed in the title of this appendix.

DATA QUALITY ASSESSMENT SUMMARY

The results for each of the QC elements are summarized below. The data assessment was performed using guidance in the USEPA Contract Laboratory Program *National Functional Guidelines for Inorganic Data Review* (USEPA 2002) and USEPA Contract Laboratory Program *National Functional Guidelines for Organic Data Review* (USEPA 2008).

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. There were no anomalies noted on the COC forms; proper COC protocols appear to have been followed for this sampling event.

Holding Times

The holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection.

Surrogate Recoveries

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

Method and Trip Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. Method blanks were analyzed with each batch of samples, at a frequency of one per twenty samples. For all sample batches, method blanks for all applicable methods were analyzed at the required frequency.

If a compound was found at a measurable concentration in the method blank, an “action level” for this compound was assigned to the associated batch samples by multiplying the concentration by

five. This action level is then multiplied by any dilutions the sample may have gone through in the laboratory extraction process.

Trip Blanks are carried with the field sampler to and from the site, and these are analyzed to ensure that the transportation environment does not introduce measurable concentrations of the analytes of interest. Trip Blanks are usually analyzed at the frequency of one per every sample cooler.

SDG 110801007: (Volatiles) The trip blank acquired on 7/26/11 reported positive results for acetone and methylene chloride, both common laboratory contaminants. For this reason, the methylene chloride results were qualified as not detected (U) in the associated field samples MW-13 (33.5) and MW-14 (28.5). There were no positive results for acetone in either of the associated field samples, no action was required.

Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

Because the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis. One aliquot of sample is analyzed in the normal manner, and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery (%R) is calculated. Matrix spike duplicates (MSD) analyses are generally performed for organic analyses as a precision check. For some organic analytical methods, such as NWTPH-Dx, a laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) sample set is performed in lieu of a MS/MSD analysis.

For inorganics methods, the matrix spike (referred to as a "spiked sample") is typically followed by a post spike sample if any element recoveries were outside the control limits in the "spike sample".

Matrix spike analyses should be performed once per analytical batch or every twenty field samples, whichever is more frequent. The recovery criteria for matrix spikes and laboratory control samples are specified in the laboratory documents as are the relative percent difference values. The frequency requirements were met for all analyses and the %R/RPD values were within the proper control limits.

Laboratory Control Samples/ Laboratory Control Sample Duplicates (LCS/LCSD)

A laboratory control sample is essentially a blank sample that is spiked with a known amount of analyte concentration and analyzed. It is to be treated much like a matrix spike, without the possibility for matrix interference. As there is no actual sample matrix in the analysis, the analytical expectations for accuracy and precision are usually more rigorous and qualification would apply to all samples in the batch, instead of the parent sample only.

Laboratory control sample analyses should be performed once per analytical batch or every twenty field samples, whichever is more frequent. The recovery criteria for laboratory control samples are specified in the laboratory documents as are the relative percent difference values. The frequency requirements were met for all analyses, and the %R/RPD values were within the proper control limits.

Field Replicates/Duplicates

Field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. As mentioned above for the laboratory duplicates the RPD is used as the criteria for assessing precision, unless one or more of the samples used has a concentration greater than five times the reporting limit for that sample, the absolute difference is used instead of the RPD.

SDG 110805029: (Volatiles & NWTPH-Gx) One set of field duplicates, MW-4-080311 and DUPLICATE-1-080311, was submitted with this SDG. All of the precision requirements were met for all target analytes.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD %R values. Precision was acceptable, as demonstrated by the laboratory duplicate, LCS/LCSD and MS/MSD RPD and absolute difference values.

Data were qualified as not detected because of trip blank contamination.

In general, the data are acceptable for use as qualified.

CASE NARRATIVE August 23, 2011, 2011

Lab Name: Anatek Labs, Inc.

Project Tracking No.: Ione, WA 0504-058-00
Anatek Batch: 110801007

Project Summary: Three soil samples were received and analyzed for NWTPH-Gx by method NWTPHG. Two soil samples were received and analyzed for VOC's by 8260C. One trip blank was received and analyzed for VOC by 8260C. The VOC's and the Trip Blank were extracted using EPA Method 5035.

QA/QC Checks

Parameters	Yes / No	Exceptions / Deviations
Sample Holding Time Valid?	Y	NA
Surrogate Recoveries Valid?	Y	NA
QC Sample(s) Recoveries Valid?	Y	NA
Method Blank(s) Valid?	Y	NA
Trip Blank Valid	N	Methylene Chloride and Acetone detected (See Comments)
Tune(s) Valid?	Y	NA
Internal Standard Responses Valid?	Y	NA
Initial Calibration Curve(s) Valid?	Y	NA
Continuing Calibration(s) Valid?	Y	NA
Comments	Y	See comments section

1. Temperature Requirements

One cooler was hand delivered to the laboratory. The temperature of the samples in the cooler was 2.9°C. The samples were received on ice.

2. Holding Time Requirements

No problems encountered.

3. GC/MS Tune Requirements

No problems encountered.

4. Calibration Requirements

No problems encountered.

5. Surrogate Recovery Requirements

No problems encountered.

6. QC Sample (LCS/MS/MSD) Recovery Requirements

No problems were encountered.

7. Method Blank Requirements

The method blanks were non-detect for all analytes. No problems encountered.

8. Internal Standard(s) Response Requirements

No problems encountered.

9. Comments

The trip blank had methylene chloride detected at 47.5 ppb and acetone was detected at 570 ppb. Both samples that were analyzed had a methylene chloride detection of about 40 ppb. The lab has concluded that the contamination from the samples came from methanol vials that were contaminated in the laboratory either before or after sampling.

I certify that this data package is in compliance with the terms and conditions of the contract. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee.

Approved by : Kathleen A. Sattler

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT. 0504-058-00

Analytical Results Report

Sample Number	110801007-003	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011	4:20 PM
Client Sample ID	MW-13 (38.5)	**Sampling Time**	9:30 AM	**Extraction Date**		
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/kg	2500	8/2/2011	WOZ	NWTPHG	
%moisture	9	Percent		8/2/2011	WOZ	%moisture	

Surrogate Data

Sample Number 110801007-003

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	74.9	70-130

Sample Number	110801007-007	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011	4:20 PM
Client Sample ID	MW-14 (33.5)	**Sampling Time**	1:40 PM	**Extraction Date**		
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/kg	2500	8/2/2011	WOZ	NWTPHG	
%moisture	12.8	Percent		8/2/2011	WOZ	%moisture	

Surrogate Data

Sample Number 110801007-007

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	85.1	70-130

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-011	**Sampling Date**	7/27/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	MW-15 (43.5)	**Sampling Time**	11:45 AM	**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/kg	2500	8/2/2011	WOZ	NWTPHG	
%moisture	10.5	Percent		8/2/2011	WOZ	%moisture	

Surrogate Data

Sample Number 110801007-011

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	87.4	70-130

Authorized Signature

Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-002	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011	4:20 PM
Client Sample ID	MW-13 (33.5)	**Sampling Time**	9:15 AM	**Extraction Date**		
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
2-hexanone	ND	mg/kg	0.12275	8/1/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Acetone	ND	mg/kg	0.12275	8/1/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Benzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Bromobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Bromoform	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Bromomethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-002	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	MW-13 (33.5)	**Sampling Time**	9:15 AM	**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chlorobenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Chloroethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Chloroform	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Chloromethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Dibromomethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	mg/kg	0.12275	8/1/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	mg/kg	0.12275	8/1/2011	WOZ	EPA 8260B	
Methylene chloride	0.0383	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	W
methyl-t-butyl ether (MTBE)	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Naphthalene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
o-Xylene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Styrene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Toluene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Trichloroethene	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	mg/kg	0.02455	8/1/2011	WOZ	EPA 8260B	
%moisture	3.8	Percent		8/2/2011	WOZ	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-002	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	MW-13 (33.5)	**Sampling Time**	9:15 AM	**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110801007-002

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.6	70-130
4-Bromofluorobenzene	EPA 8260B	96.0	70-130
Toluene-d8	EPA 8260B	99.6	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT. 0504-058-00

Analytical Results Report

Sample Number 110801007-006
Client Sample ID MW-14 (28.5)
Matrix Soil
Comments

Sampling Date 7/26/2011
Sampling Time 1:30 PM
Sample Location

Date/Time Received 7/29/2011 4:20 PM
Extraction Date

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
2-hexanone	ND	mg/kg	0.13125	8/1/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Acetone	ND	mg/kg	0.13125	8/1/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Benzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Bromobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Bromoform	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Bromomethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT. 0504-058-00

Analytical Results Report

Sample Number	110801007-006	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	MW-14 (28.5)	**Sampling Time**	1:30 PM	**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Chloroform	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Chloromethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Dibromomethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	mg/kg	0.13125	8/1/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	mg/kg	0.13125	8/1/2011	WOZ	EPA 8260B	
Methylene chloride	0.0404	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	W
methyl-t-butyl ether (MTBE)	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Naphthalene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
o-Xylene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Styrene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Toluene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Trichloroethene	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	mg/kg	0.02625	8/1/2011	WOZ	EPA 8260B	
%moisture	9.9	Percent		8/2/2011	WOZ	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-006	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	MW-14 (28.5)	**Sampling Time**	1:30 PM	**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110801007-006

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	98.8	70-130
4-Bromofluorobenzene	EPA 8260B	97.6	70-130
Toluene-d8	EPA 8260B	101.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-013	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	TRIP BLANK	**Sampling Time**		**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
2-hexanone	ND	mg/kg	0.125	8/1/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Acetone	0.570	mg/kg	0.125	8/1/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Benzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Bromobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Bromoform	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Bromomethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Sample Number	110801007-013	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	TRIP BLANK	**Sampling Time**		**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Chloroform	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Chloromethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Dibromomethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	mg/kg	0.125	8/1/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	mg/kg	0.125	8/1/2011	WOZ	EPA 8260B	
Methylene chloride	0.0475	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Naphthalene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
o-Xylene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Styrene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Toluene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Trichloroethene	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	mg/kg	0.025	8/1/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110801007
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONT. 0504-058-00
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110801007-013	**Sampling Date**	7/26/2011	**Date/Time Received**	7/29/2011 4:20 PM
Client Sample ID	TRIP BLANK	**Sampling Time**		**Extraction Date**	
Matrix	Soil	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110801007-013

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	97.6	70-130
4-Bromofluorobenzene	EPA 8260B	96.4	70-130
Toluene-d8	EPA 8260B	100.8	70-130

Authorized Signature Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit
W	Analyte was detected in both the sample and the associated trip blank

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT. 0504-058-00

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Trichloroethene	0.00896	mg/kg	0.01	89.6	73-124	8/1/2011	8/1/2011
Toluene	0.00889	mg/kg	0.01	88.9	77-123	8/1/2011	8/1/2011
Tetrachloroethene	0.00841	mg/kg	0.01	84.1	68-130	8/1/2011	8/1/2011
o-Xylene	0.00964	mg/kg	0.01	96.4	77-121	8/1/2011	8/1/2011
Ethylbenzene	0.00860	mg/kg	0.01	86.0	76-124	8/1/2011	8/1/2011
Chlorobenzene	0.00945	mg/kg	0.01	94.5	78-119	8/1/2011	8/1/2011
Benzene	0.00904	mg/kg	0.01	90.4	83-127	8/1/2011	8/1/2011
1,1-Dichloroethene	0.0101	mg/kg	0.01	101.0	77-138	8/1/2011	8/1/2011

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,1,1-Trichloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,1,2-Trichloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,1-Dichloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,1-Dichloroethene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,1-dichloropropene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2,3-Trichlorobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2,3-Trichloropropane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2,4-Trichlorobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2,4-Trimethylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2-Dibromoethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2-Dichlorobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2-Dichloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,2-Dichloropropane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,3,5-Trimethylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,3-Dichlorobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,3-Dichloropropane	ND	mg/kg	0.005	8/1/2011	8/1/2011
1,4-Dichlorobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
2,2-Dichloropropane	ND	mg/kg	0.005	8/1/2011	8/1/2011
2-Chlorotoluene	ND	mg/kg	0.005	8/1/2011	8/1/2011

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
2-hexanone	ND	mg/kg	0.025	8/1/2011	8/1/2011
4-Chlorotoluene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Acetone	ND	mg/kg	0.025	8/1/2011	8/1/2011
Acrylonitrile	ND	mg/kg	0.005	8/1/2011	8/1/2011
Benzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Bromobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Bromochloromethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Bromodichloromethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Bromoform	ND	mg/kg	0.005	8/1/2011	8/1/2011
Bromomethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Carbon disulfide	ND	mg/kg	0.005	8/1/2011	8/1/2011
Carbon Tetrachloride	ND	mg/kg	0.005	8/1/2011	8/1/2011
Chlorobenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Chloroethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Chloroform	ND	mg/kg	0.005	8/1/2011	8/1/2011
Chloromethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
cis-1,2-dichloroethene	ND	mg/kg	0.005	8/1/2011	8/1/2011
cis-1,3-Dichloropropene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Dibromochloromethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Dibromomethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Dichlorodifluoromethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Ethylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Hexachlorobutadiene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Isopropylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
m+p-Xylene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Methyl ethyl ketone (MEK)	ND	mg/kg	0.025	8/1/2011	8/1/2011
Methyl isobutyl ketone (MIBK)	ND	mg/kg	0.025	8/1/2011	8/1/2011
Methylene chloride	ND	mg/kg	0.025	8/1/2011	8/1/2011
methyl-t-butyl ether (MTBE)	ND	mg/kg	0.005	8/1/2011	8/1/2011
Naphthalene	ND	mg/kg	0.005	8/1/2011	8/1/2011
n-Butylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
n-Propylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
o-Xylene	ND	mg/kg	0.005	8/1/2011	8/1/2011
p-isopropyltoluene	ND	mg/kg	0.005	8/1/2011	8/1/2011
sec-Butylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Styrene	ND	mg/kg	0.005	8/1/2011	8/1/2011
tert-Butylbenzene	ND	mg/kg	0.005	8/1/2011	8/1/2011

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Tetrachloroethene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Toluene	ND	mg/kg	0.005	8/1/2011	8/1/2011
trans-1,2-Dichloroethene	ND	mg/kg	0.005	8/1/2011	8/1/2011
trans-1,3-Dichloropropene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Trichloroethene	ND	mg/kg	0.005	8/1/2011	8/1/2011
Trichloroflouromethane	ND	mg/kg	0.005	8/1/2011	8/1/2011
Vinyl Chloride	ND	mg/kg	0.005	8/1/2011	8/1/2011

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110801007
Project Name: IONE PETROLEUM CONT.
0504-058-00

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Gasoline	26.4	mg/kg	22	120.0	70-130	8/2/2011	8/2/2011

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
110801007-007	Gasoline	ND	20.1	mg/kg	22	91.4	70-130	8/2/2011	8/2/2011

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Gasoline	21.9	mg/kg	22	99.5	8.6	0-20	8/2/2011	8/2/2011

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Gasoline	ND	mg/kg	2.5	8/2/2011	8/2/2011

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Login Report

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER
Comment:

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-001 **Customer Sample #:** MW-1-080311

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/3/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-002 **Customer Sample #:** MW-2-080311

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/3/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-003 **Customer Sample #:** MW-3-080311

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/3/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Contact Name: DAVE LAUDER

Comment:

Order ID: 110805029

Order Date: 8/5/2011

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-004 **Customer Sample #:** MW-4-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-005 **Customer Sample #:** MW-6-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-006 **Customer Sample #:** MW-7-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-007 **Customer Sample #:** MW-8-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Comment:

Sample #: 110805029-008 **Customer Sample #:** MW-9-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-009 **Customer Sample #:** MW-10-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-010 **Customer Sample #:** MW-11-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-011 **Customer Sample #:** MW-12-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Contact Name: DAVE LAUDER

Comment:

Order ID: 110805029

Order Date: 8/5/2011

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-012 **Customer Sample #:** MW-13-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-013 **Customer Sample #:** MW-14-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-014 **Customer Sample #:** MW-15-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-015 **Customer Sample #:** CABIN GRILL-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Comment:

Sample #: 110805029-016 **Customer Sample #:** DUPLICATE-1

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-017 **Customer Sample #:** TRIP BLANKS

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment: TRIP BLANKS HAVE VERY SMALL AMOUNT OF HEADSPACE

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature inside the cooler?	4.2
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Are VOC samples free of headspace?	Yes
Is there a trip blank to accompany VOC samples?	Yes
Labels and chain agree?	Yes

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

110801 007 GEOE Last Due 8/11/2011
1st SAMP 7/26/2011 1st RCVD 7/29/2011
ONE PETROLEUM CONT. 0504-058-00

Company Name: GeoEngineers	Project Manager: Dave Lauder
Address: 523 E 2nd Ave	Project Name & #: Tone Petroleum Cont. 0504-058-00
City: Spokane State: WA Zip: 99202	Email Address: DLauder@geoengineers.com
Phone: 509-363-3125	Purchase Order #:
Fax: 363-3126	Sampler Name & phone: Kevin Rodell 435-764-7169

Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp

X Normal __Next Day* __2nd Day* __Other*_____ *All rush order requests must be prior approved. __Phone __Mail __Fax __Email

Provide Sample Description

List Analyses Requested

Note Special Instructions/Comments

SWBS allsp

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative	NWTPH-Gx	VOC's (EPA 8260B)
1	MW-13 (28.5)	7/26/11 0900	Soil	1				
2	MW-13 (33.5)	7/26/11 0915		2				X
3	MW-13 (38.5)	7/26/11 0930		1			X	
4	MW-13 (43.5)	7/26/11 0945		1				
5	MW-14 (23.5)	7/26/11 1320		1				
6	MW-14 (28.5)	7/26/11 1330		2				X
7	MW-14 (33.5)	7/26/11 1340		1			X	
8	MW-14 (38.5)	7/26/11 1350		1				
9	MW-15 (33.5)	7/27/11 1115		1				
10	MW-15 (38.5)	7/27/11 1130		2				
11	MW-15 (43.5)	7/27/11 1145		1			X	
12	MW-15 (48.5)	7/27/11 1200	↓	1				

	Printed Name	Signature	Company	Date	Time
Relinquished by	Kevin Rodell		GEI	7/29/11	1620
Received by	Kathy Sattler	Kathy Sattler	Anatek Labs	7-29-11	1620
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?		N
VOC Head Space?	Y	N

Hand delivered
Cooler | Ice
Temperature (°C): 2.9
Preservative: 5035 Extraction

Date & Time: 7-29-11 | 1620
Inspected By: KAS

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-001	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-1-080311	**Sampling Time**	10:30 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-001

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	96.4	70-130

Sample Number	110805029-002	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-2-080311	**Sampling Time**	11:20 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-002

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	94.7	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-003	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-3-080311	**Sampling Time**	4:12 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	74700	ug/L	1000	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-003

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	97.2	70-130

Sample Number	110805029-004	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-4-080311	**Sampling Time**	2:21 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	687	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-004

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	99.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number 110805029-005 | **Sampling Date** 8/3/2011 | **Date/Time Received** 8/5/2011 10:40 AM
Client Sample ID MW-6-080311 | **Sampling Time** 3:31 PM | **Extraction Date**
Matrix Water | **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	21900	ug/L	1000	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-005

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	106.7	70-130

Sample Number 110805029-006 | **Sampling Date** 8/3/2011 | **Date/Time Received** 8/5/2011 10:40 AM
Client Sample ID MW-7-080311 | **Sampling Time** 12:07 PM | **Extraction Date**
Matrix Water | **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-006

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	99.5	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-007	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-8-080311	**Sampling Time**	5:25 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	227000	ug/L	10000	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-007

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	99.3	70-130

Sample Number	110805029-008	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-9-080311	**Sampling Time**	12:41 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-008

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	103.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-009	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-10-080311	**Sampling Time**	2:45 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-009

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	104.0	70-130

Sample Number	110805029-010	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-11-080311	**Sampling Time**	1:45 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/8/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-010

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	104.3	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-011	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-12-080311	**Sampling Time**	3:58 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-011

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	104.3	70-130

Sample Number	110805029-012	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-13-080411	**Sampling Time**	11:31 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	771	ug/L	100	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-012

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	99.5	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-013	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-14-080411	**Sampling Time**	8:51 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	ND	ug/L	100	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-013

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	98.8	70-130

Sample Number	110805029-014	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-15-080411	**Sampling Time**	10:16 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	1660	ug/L	100	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-014

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	97.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-015	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	CABIN GRILL-080411	**Sampling Time**	4:40 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	45500	ug/L	1000	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-015

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	97.3	70-130

Sample Number	110805029-016	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	DUPLICATE-1	**Sampling Time**	12:34 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Gasoline	708	ug/L	100	8/9/2011	WOZ	NWTPHG	

Surrogate Data

Sample Number 110805029-016

Surrogate Standard	Method	Percent Recovery	Control Limits
4-Bromofluorobenzene	NWTPHG	100.6	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Authorized Signature Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-001	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-1-080311	**Sampling Time**	10:30 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-001	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-1-080311	**Sampling Time**	10:30 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-001	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-1-080311	**Sampling Time**	10:30 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-001

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	100.4	70-130
4-Bromofluorobenzene	EPA 8260B	96.0	70-130
Toluene-d8	EPA 8260B	98.4	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-002	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-2-080311	**Sampling Time**	11:20 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-002	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-2-080311	**Sampling Time**	11:20 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-002	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-2-080311	**Sampling Time**	11:20 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-002

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.2	70-130
4-Bromofluorobenzene	EPA 8260B	98.0	70-130
Toluene-d8	EPA 8260B	98.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-003	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-3-080311	**Sampling Time**	4:12 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	853	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2500	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2500	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Benzene	5470	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-003	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM	
Client Sample ID	MW-3-080311	**Sampling Time**	4:12 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	1700	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	6830	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2500	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2500	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2500	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
o-Xylene	3160	ug/L	500	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Toluene	16200	ug/L	500	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	500	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-003	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-3-080311	**Sampling Time**	4:12 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-003

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	98.4	70-130
4-Bromofluorobenzene	EPA 8260B	96.8	70-130
Toluene-d8	EPA 8260B	98.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-004	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-4-080311	**Sampling Time**	2:21 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	19.2	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	10.9	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	3.52	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	3.85	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-004	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-4-080311	**Sampling Time**	2:21 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	9.36	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	74.8	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	0.96	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	0.60	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	0.51	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	63.6	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	0.56	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	45.5	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-004	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-4-080311	**Sampling Time**	2:21 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-004

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	100.8	70-130
4-Bromofluorobenzene	EPA 8260B	100.0	70-130
Toluene-d8	EPA 8260B	101.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-005	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-6-080311	**Sampling Time**	3:31 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	237	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	192	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	250	8/11/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	250	8/11/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Benzene	557	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-005	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-6-080311	**Sampling Time**	3:31 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	547	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	2170	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	250	8/11/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	250	8/11/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	250	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Naphthalene	97.7	ug/L	50	8/11/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
o-Xylene	1680	ug/L	50	8/11/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Toluene	2130	ug/L	50	8/11/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	50	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-005	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-6-080311	**Sampling Time**	3:31 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-005

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.6	70-130
4-Bromofluorobenzene	EPA 8260B	100.0	70-130
Toluene-d8	EPA 8260B	95.6	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-006	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-7-080311	**Sampling Time**	12:07 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-006	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-7-080311	**Sampling Time**	12:07 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-006	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-7-080311	**Sampling Time**	12:07 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-006

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	100.4	70-130
4-Bromofluorobenzene	EPA 8260B	99.2	70-130
Toluene-d8	EPA 8260B	100.4	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-007	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-8-080311	**Sampling Time**	5:25 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	3560	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	1080	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2500	8/11/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2500	8/11/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Benzene	2140	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-007	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-8-080311	**Sampling Time**	5:25 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	6740	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	27200	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2500	8/11/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2500	8/11/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2500	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Naphthalene	869	ug/L	500	8/11/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
o-Xylene	12100	ug/L	500	8/11/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Toluene	26700	ug/L	500	8/11/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-007	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-8-080311	**Sampling Time**	5:25 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-007

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.2	70-130
4-Bromofluorobenzene	EPA 8260B	100.4	70-130
Toluene-d8	EPA 8260B	96.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-008	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-9-080311	**Sampling Time**	12:41 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-008	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-9-080311	**Sampling Time**	12:41 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-008	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-9-080311	**Sampling Time**	12:41 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-008

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.6	70-130
4-Bromofluorobenzene	EPA 8260B	96.8	70-130
Toluene-d8	EPA 8260B	100.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-009	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM	
Client Sample ID	MW-10-080311	**Sampling Time**	2:45 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-009	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-10-080311	**Sampling Time**	2:45 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-009	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-10-080311	**Sampling Time**	2:45 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-009

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	101.2	70-130
4-Bromofluorobenzene	EPA 8260B	95.2	70-130
Toluene-d8	EPA 8260B	100.4	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-010	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-11-080311	**Sampling Time**	1:45 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-010	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-11-080311	**Sampling Time**	1:45 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-010	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-11-080311	**Sampling Time**	1:45 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-010

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	98.4	70-130
4-Bromofluorobenzene	EPA 8260B	98.4	70-130
Toluene-d8	EPA 8260B	98.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-011	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-12-080311	**Sampling Time**	3:58 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-011	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-12-080311	**Sampling Time**	3:58 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-011	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-12-080311	**Sampling Time**	3:58 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-011

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.6	70-130
4-Bromofluorobenzene	EPA 8260B	97.6	70-130
Toluene-d8	EPA 8260B	100.4	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-012	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-13-080411	**Sampling Time**	11:31 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	10.3	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	35.8	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	7.98	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-012	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-13-080411	**Sampling Time**	11:31 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	31.0	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Isopropylbenzene	1.61	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	77.9	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	16.5	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
n-Butylbenzene	2.05	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
n-Propylbenzene	3.28	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	73.8	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
p-isopropyltoluene	1.14	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	2.66	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-012	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-13-080411	**Sampling Time**	11:31 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-012

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	100.4	70-130
4-Bromofluorobenzene	EPA 8260B	102.8	70-130
Toluene-d8	EPA 8260B	97.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-013	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-14-080411	**Sampling Time**	8:51 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-013	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-14-080411	**Sampling Time**	8:51 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-013	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-14-080411	**Sampling Time**	8:51 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-013

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.6	70-130
4-Bromofluorobenzene	EPA 8260B	95.2	70-130
Toluene-d8	EPA 8260B	101.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-014	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-15-080411	**Sampling Time**	10:16 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	27.0	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	125	8/11/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	125	8/11/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Benzene	847	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-014	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-15-080411	**Sampling Time**	10:16 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	129	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	125	8/11/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	125	8/11/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	125	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Naphthalene	41.9	ug/L	25	8/11/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
o-Xylene	73.2	ug/L	25	8/11/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Toluene	29.8	ug/L	25	8/11/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	25	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-014	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-15-080411	**Sampling Time**	10:16 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-014

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	101.6	70-130
4-Bromofluorobenzene	EPA 8260B	95.6	70-130
Toluene-d8	EPA 8260B	96.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-015	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	CABIN GRILL-080411	**Sampling Time**	4:40 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	967	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	433	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Benzene	143	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-015	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	CABIN GRILL-080411	**Sampling Time**	4:40 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	997	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	5140	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	500	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Naphthalene	244	ug/L	100	8/11/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
n-Propylbenzene	116	ug/L	100	8/11/2011	WOZ	EPA 8260B	
o-Xylene	2570	ug/L	100	8/11/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Toluene	5440	ug/L	100	8/11/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Trichloroflouromethane	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	100	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-015	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	CABIN GRILL-080411	**Sampling Time**	4:40 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-015

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	102.4	70-130
4-Bromofluorobenzene	EPA 8260B	99.2	70-130
Toluene-d8	EPA 8260B	96.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-016	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	DUPLICATE-1	**Sampling Time**	12:34 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	18.7	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	10.7	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	3.57	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-016	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM	
Client Sample ID	DUPLICATE-1	**Sampling Time**	12:34 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	9.67	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	75.7	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	1.06	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
n-Butylbenzene	0.60	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
n-Propylbenzene	0.50	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	63.7	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
p-isopropyltoluene	0.51	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	41.8	ug/L	2.5	8/11/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-016	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	DUPLICATE-1	**Sampling Time**	12:34 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-016

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	96.0	70-130
4-Bromofluorobenzene	EPA 8260B	100.4	70-130
Toluene-d8	EPA 8260B	96.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Sample Number	110805029-017	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	TRIP BLANKS	**Sampling Time**		**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
2-hexanone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Acetone	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Acrylonitrile	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromoform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Bromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon disulfide	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chlorobenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-017	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	TRIP BLANKS	**Sampling Time**		**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Chloroethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloroform	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Chloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dibromomethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
Methylene chloride	ND	ug/L	2.5	8/10/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Styrene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichloroethene	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	WOZ	EPA 8260B	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Sample Number	110805029-017	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	TRIP BLANKS	**Sampling Time**		**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier

Surrogate Data

Sample Number 110805029-017

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	100.4	70-130
4-Bromofluorobenzene	EPA 8260B	96.4	70-130
Toluene-d8	EPA 8260B	99.6	70-130

Authorized Signature Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit
W	Analyte was detected in both the sample and the associated trip blank

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-001	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-1-080311	**Sampling Time**	10:30 AM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-001

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	99.6	70-130
4-Bromofluorobenzene	EPA 8260B	104.0	70-130
Toluene-d8	EPA 8260B	119.2	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-002	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM	
Client Sample ID	MW-2-080311	**Sampling Time**	11:20 AM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-002

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	90.0	70-130
4-Bromofluorobenzene	EPA 8260B	101.6	70-130
Toluene-d8	EPA 8260B	99.6	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-006	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-7-080311	**Sampling Time**	12:07 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-006

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	98.0	70-130
4-Bromofluorobenzene	EPA 8260B	102.8	70-130
Toluene-d8	EPA 8260B	110.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-008	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-9-080311	**Sampling Time**	12:41 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-008

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	111.6	70-130
4-Bromofluorobenzene	EPA 8260B	113.2	70-130
Toluene-d8	EPA 8260B	108.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-009	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-10-080311	**Sampling Time**	2:45 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-009

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	102.0	70-130
4-Bromofluorobenzene	EPA 8260B	102.8	70-130
Toluene-d8	EPA 8260B	108.4	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-010	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-11-080311	**Sampling Time**	1:45 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-010

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	100.0	70-130
4-Bromofluorobenzene	EPA 8260B	112.4	70-130
Toluene-d8	EPA 8260B	108.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-011	**Sampling Date**	8/3/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	MW-12-080311	**Sampling Time**	3:58 PM	**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-011

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	104.0	70-130
4-Bromofluorobenzene	EPA 8260B	106.0	70-130
Toluene-d8	EPA 8260B	109.6	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-013	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011 10:40 AM
Client Sample ID	MW-14-080411	**Sampling Time**	8:51 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-013

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	106.0	70-130
4-Bromofluorobenzene	EPA 8260B	96.4	70-130
Toluene-d8	EPA 8260B	102.0	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report (RBCA Volatiles)

Sample Number	110805029-017	**Sampling Date**	8/4/2011	**Date/Time Received**	8/5/2011	10:40 AM
Client Sample ID	TRIP BLANKS	**Sampling Time**		**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	WOZ	EPA 8260B	
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Benzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Ethylbenzene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
m+p-Xylene	ND	ug/L	1	8/11/2011	WOZ	EPA 8260B	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Naphthalene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
o-Xylene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	
Toluene	ND	ug/L	0.5	8/11/2011	WOZ	EPA 8260B	

Surrogate Data

Sample Number 110805029-017

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260B	98.4	70-130
4-Bromofluorobenzene	EPA 8260B	110.8	70-130
Toluene-d8	EPA 8260B	102.8	70-130

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	GEO ENGINEERS	**Batch #:**	110805029
Address:	523 E 2ND SPOKANE, WA 99202	**Project Name:**	IONE PETROLEUM CONTAMINATION 0504-058-01
Attn:	DAVE LAUDER		

Analytical Results Report

Authorized Signature

Kathy Sattler, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Benzene	3.62	ug/L	5	72.4	75-125	8/11/2011	8/11/2011
Chlorobenzene	5.57	ug/L	5	111.4	85-115	8/10/2011	8/10/2011
Ethylbenzene	5.10	ug/L	5	102.0	84-115	8/10/2011	8/10/2011
o-Xylene	5.77	ug/L	5	115.4	83-117	8/10/2011	8/10/2011
Tetrachloroethene	5.14	ug/L	5	102.8	64-132	8/10/2011	8/10/2011
Toluene	5.02	ug/L	5	100.4	76-123	8/10/2011	8/10/2011
Benzene	5.09	ug/L	5	101.8	75-125	8/10/2011	8/10/2011
1,1-Dichloroethene	4.70	ug/L	5	94.0	68-127	8/11/2011	8/11/2011
1,1-Dichloroethene	4.48	ug/L	5	89.6	68-127	8/10/2011	8/10/2011
Chlorobenzene	4.58	ug/L	5	91.6	85-115	8/11/2011	8/11/2011
Ethylbenzene	3.94	ug/L	5	78.8	84-115	8/11/2011	8/11/2011
o-Xylene	4.43	ug/L	5	88.6	83-117	8/11/2011	8/11/2011
Tetrachloroethene	3.53	ug/L	5	70.6	64-132	8/11/2011	8/11/2011
Toluene	3.55	ug/L	5	71.0	76-123	8/11/2011	8/11/2011
Trichloroethene	3.71	ug/L	5	74.2	72-125	8/11/2011	8/11/2011
Trichloroethene	5.20	ug/L	5	104.0	72-125	8/10/2011	8/10/2011

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1,1-Trichloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1,1-Trichloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,1,2-Trichloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,1,2-Trichloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1-Dichloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1-Dichloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,1-Dichloroethene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1-Dichloroethene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,1-dichloropropene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,1-dichloropropene	ND	ug/L	0.5	8/11/2011	8/11/2011

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2,3-Trichloropropane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2,3-Trichloropropane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2-Dibromoethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2-Dibromoethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2-Dichloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,2-Dichloropropane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,3-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,3-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
1,3-Dichloropropane	ND	ug/L	0.5	8/10/2011	8/10/2011
1,3-Dichloropropane	ND	ug/L	0.5	8/11/2011	8/11/2011
1,4-Dichlorobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
1,4-Dichlorobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
2,2-Dichloropropane	ND	ug/L	0.5	8/10/2011	8/10/2011
2,2-Dichloropropane	ND	ug/L	0.5	8/11/2011	8/11/2011
2-Chlorotoluene	ND	ug/L	0.5	8/11/2011	8/11/2011
2-Chlorotoluene	ND	ug/L	0.5	8/10/2011	8/10/2011
2-hexanone	ND	ug/L	2.5	8/10/2011	8/10/2011
2-hexanone	ND	ug/L	2.5	8/11/2011	8/11/2011
4-Chlorotoluene	ND	ug/L	0.5	8/10/2011	8/10/2011
4-Chlorotoluene	ND	ug/L	0.5	8/11/2011	8/11/2011
Acetone	ND	ug/L	2.5	8/10/2011	8/10/2011
Acetone	ND	ug/L	2.5	8/11/2011	8/11/2011
Acrylonitrile	ND	ug/L	0.5	8/10/2011	8/10/2011

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Acrylonitrile	ND	ug/L	0.5	8/11/2011	8/11/2011
Benzene	ND	ug/L	0.5	8/10/2011	8/10/2011
Benzene	ND	ug/L	0.5	8/11/2011	8/11/2011
Bromobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
Bromobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
Bromochloromethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Bromochloromethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Bromodichloromethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Bromodichloromethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Bromoform	ND	ug/L	0.5	8/10/2011	8/10/2011
Bromoform	ND	ug/L	0.5	8/11/2011	8/11/2011
Bromomethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Bromomethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Carbon disulfide	ND	ug/L	0.5	8/10/2011	8/10/2011
Carbon disulfide	ND	ug/L	0.5	8/11/2011	8/11/2011
Carbon Tetrachloride	ND	ug/L	0.5	8/11/2011	8/11/2011
Carbon Tetrachloride	ND	ug/L	0.5	8/10/2011	8/10/2011
Chlorobenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
Chlorobenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
Chloroethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Chloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Chloroform	ND	ug/L	0.5	8/11/2011	8/11/2011
Chloroform	ND	ug/L	0.5	8/10/2011	8/10/2011
Chloromethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Chloromethane	ND	ug/L	0.5	8/11/2011	8/11/2011
cis-1,2-dichloroethene	ND	ug/L	0.5	8/10/2011	8/10/2011
cis-1,2-dichloroethene	ND	ug/L	0.5	8/11/2011	8/11/2011
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	8/10/2011
cis-1,3-Dichloropropene	ND	ug/L	0.5	8/11/2011	8/11/2011
Dibromochloromethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Dibromochloromethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Dibromomethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Dibromomethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Dichlorodifluoromethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Dichlorodifluoromethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Ethylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
Ethylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Hexachlorobutadiene	ND	ug/L	0.5	8/10/2011	8/10/2011
Hexachlorobutadiene	ND	ug/L	0.5	8/11/2011	8/11/2011
Isopropylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
Isopropylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
m+p-Xylene	ND	ug/L	0.5	8/11/2011	8/11/2011
m+p-Xylene	ND	ug/L	0.5	8/10/2011	8/10/2011
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/10/2011	8/10/2011
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	8/11/2011	8/11/2011
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/10/2011	8/10/2011
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	8/11/2011	8/11/2011
Methylene chloride	ND	ug/L	2.5	8/10/2011	8/10/2011
Methylene chloride	ND	ug/L	2.5	8/11/2011	8/11/2011
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	8/11/2011
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/10/2011	8/10/2011
Naphthalene	ND	ug/L	0.5	8/11/2011	8/11/2011
Naphthalene	ND	ug/L	0.5	8/10/2011	8/10/2011
n-Butylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
n-Butylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
n-Propylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
n-Propylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
o-Xylene	ND	ug/L	0.5	8/10/2011	8/10/2011
o-Xylene	ND	ug/L	0.5	8/11/2011	8/11/2011
p-isopropyltoluene	ND	ug/L	0.5	8/10/2011	8/10/2011
p-isopropyltoluene	ND	ug/L	0.5	8/11/2011	8/11/2011
sec-Butylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
sec-Butylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
Styrene	ND	ug/L	0.5	8/11/2011	8/11/2011
Styrene	ND	ug/L	0.5	8/10/2011	8/10/2011
tert-Butylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
tert-Butylbenzene	ND	ug/L	0.5	8/10/2011	8/10/2011
Tetrachloroethene	ND	ug/L	0.5	8/10/2011	8/10/2011
Tetrachloroethene	ND	ug/L	0.5	8/11/2011	8/11/2011
Toluene	ND	ug/L	0.5	8/10/2011	8/10/2011
Toluene	ND	ug/L	0.5	8/11/2011	8/11/2011
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/11/2011	8/11/2011
trans-1,2-Dichloroethene	ND	ug/L	0.5	8/10/2011	8/10/2011
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/10/2011	8/10/2011

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
trans-1,3-Dichloropropene	ND	ug/L	0.5	8/11/2011	8/11/2011
Trichloroethene	ND	ug/L	0.5	8/10/2011	8/10/2011
Trichloroethene	ND	ug/L	0.5	8/11/2011	8/11/2011
Trichlorofluoromethane	ND	ug/L	0.5	8/10/2011	8/10/2011
Trichlorofluoromethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Vinyl Chloride	ND	ug/L	0.5	8/11/2011	8/11/2011
Vinyl Chloride	ND	ug/L	0.5	8/10/2011	8/10/2011

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Toluene	0.96	ug/L	1	96.0	76-123	8/11/2011	8/11/2011
o-Xylene	0.85	ug/L	1	85.0	83-117	8/11/2011	8/11/2011
Ethylbenzene	0.89	ug/L	1	89.0	84-115	8/11/2011	8/11/2011
Benzene	0.97	ug/L	1	97.0	75-125	8/11/2011	8/11/2011

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,2-Dibromoethane	ND	ug/L	0.01	8/11/2011	8/11/2011
1,2-Dichloroethane	ND	ug/L	0.5	8/11/2011	8/11/2011
Benzene	ND	ug/L	0.5	8/11/2011	8/11/2011
Ethylbenzene	ND	ug/L	0.5	8/11/2011	8/11/2011
m+p-Xylene	ND	ug/L	1	8/11/2011	8/11/2011
methyl-t-butyl ether (MTBE)	ND	ug/L	0.5	8/11/2011	8/11/2011
Naphthalene	ND	ug/L	0.5	8/11/2011	8/11/2011
o-Xylene	ND	ug/L	0.5	8/11/2011	8/11/2011
Toluene	ND	ug/L	0.5	8/11/2011	8/11/2011

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: GEO ENGINEERS
Address: 523 E 2ND
SPOKANE, WA 99202
Attn: DAVE LAUDER

Batch #: 110805029
Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Gasoline	0.973	mg/L	1.1	88.5	70-130	8/9/2011	8/9/2011
Gasoline	0.971	mg/L	1.1	88.3	70-130	8/8/2011	8/8/2011

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
110805029-012	Gasoline	771	1.85	mg/L	1.1	98.1	70-130	8/9/2011	8/9/2011
110805029-001	Gasoline	ND	2.12	mg/L	2.2	96.4	70-130	8/8/2011	8/8/2011

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Gasoline	1.76	mg/L	1.1	89.9	8.7	0-20	8/9/2011	8/9/2011
Gasoline	2.08	mg/L	2.2	94.5	1.9	0-20	8/8/2011	8/8/2011

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Gasoline	ND	mg/L	0.1	8/9/2011	8/9/2011
Gasoline	ND	mg/L	0.1	8/8/2011	8/8/2011

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Login Report

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER
Comment:

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-001 **Customer Sample #:** MW-1-080311

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/3/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-002 **Customer Sample #:** MW-2-080311

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/3/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-003 **Customer Sample #:** MW-3-080311

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/3/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER
Comment:

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-004 **Customer Sample #:** MW-4-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-005 **Customer Sample #:** MW-6-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-006 **Customer Sample #:** MW-7-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-007 **Customer Sample #:** MW-8-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER
Comment:

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-008 **Customer Sample #:** MW-9-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-009 **Customer Sample #:** MW-10-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-010 **Customer Sample #:** MW-11-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-011 **Customer Sample #:** MW-12-080311

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/3/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER
Comment:

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-012 **Customer Sample #:** MW-13-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-013 **Customer Sample #:** MW-14-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-014 **Customer Sample #:** MW-15-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-015 **Customer Sample #:** CABIN GRILL-080411

Recv'd: ☑ **Collector:** K RANDALL **Date Collected:** 8/4/2011
Quantity: 1 **Matrix:** Water **Date Received:** 8/5/2011 10:40:00 A
Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Customer Name: GEO ENGINEERS
523 E 2ND
SPOKANE WA 99202

Order ID: 110805029
Order Date: 8/5/2011

Contact Name: DAVE LAUDER
Comment:

Project Name: IONE PETROLEUM CONTAMINATION 0504-058-01

Sample #: 110805029-016 **Customer Sample #:** DUPLICATE-1

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/4/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment:

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

Sample #: 110805029-017 **Customer Sample #:** TRIP BLANKS

Recv'd:	☑	**Collector:**	K RANDALL	**Date Collected:**	8/4/2011
Quantity:	1	**Matrix:**	Water	**Date Received:**	8/5/2011 10:40:00 A

Comment: TRIP BLANKS HAVE VERY SMALL AMOUNT OF HEADSPACE

Test	Lab	Method	Due Date	Priority
TPHG-NW-SPO	S	NWTPHG	8/12/2011	***Normal (6-10 Days)***
VOLATILES 8260	S	EPA 8260B	8/15/2011	***Normal (6-10 Days)***

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature inside the cooler?	4.2
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Are VOC samples free of headspace?	Yes
Is there a trip blank to accompany VOC samples?	Yes
Labels and chain agree?	Yes

Anatek Labs, Inc.

Chain of Custody Record

(1/2)

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

110805 029 GEOE Last Due 8/15/2011
1st SAMP 8/3/2011 1st RCVD 8/5/2011
ONE PETROLEUM CONTAMINATION 0504-058-01

Company Name: GeoEngineers Inc.	Project Manager: Dave Lauder
Address: 523 E 2nd Ave	Project Name & #: Lone Petroleum Contamination 0504-058-01
City: Spokane State: WA Zip: 99202	Email Address: DLauder@geoengineers.com
Phone: 509-363-3125	Purchase Order #:
Fax: 363-3126	Sampler Name & phone: Kevin L. Rondell 435-764-7169

http://www.anateklabs.com/services/guidelines/reporting.asp

X Normal __Next Day* __2nd Day* __Other*_____ *All rush order requests must be prior approved.

__Phone __Mail __Fax __Email

Provide Sample Description / **List Analyses Requested**

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative	NWTPH-GX	VOCs by EPA 8260 or 8021
1	MW-1-080311	8/3/11 1030	W	4			X	X
2	MW-2-080311	8/3/11 1120					X	X
3	MW-3-080911	8/4/11 1612					X	X
4	MW-4-080411	8/4/11 1421					X	X
5	MW-6-080411	8/4/11 1531					X	X
6	MW-7-080311	8/3/11 1207					X	X
7	MW-8-080411	8/4/11 1735					X	X
8	MW-9-080311	8/3/11 1241					X	X
9	MW-10-080311	8/3/11 1445					X	X
10	MW-11-080311	8/3/11 1345					X	X
11	MW-12-080311	8/3/11 1558					X	X
12	MW-13-080411	8/4/11 1131					X	X
13	MW-14-080411	8/4/11 0851					X	X

Note Special Instructions/Comments

SWBS
all sp

*Trip blanks have small amount of air/headspace

	Printed Name	Signature	Company	Date	Time
Relinquished by	Kevin Rondell	Kevin Rondell	GEI	8/5/11	1040
Received by			Anatek	8/5	1040
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact?	(Y)	N
Labels & Chains Agree?	(Y)	N
Containers Sealed?	(Y)	N
VOC Head Space?	Y	(N)

hand del / Carter

Temperature (°C): 4.2°
Preservative: HCl
Date & Time: 8/5/11
Inspected By: KLS

Anatek Labs, Inc.

Chain of Custody Record

2/2

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

110805 029 GEOE Last Due 8/15/2011
1st SAMP 8/3/2011 1st RCVD 8/5/2011
ONE PETROLEUM
CONTAMINATION 0504-058-01

Company Name: GeoEngineers Inc.	Project Manager: Dave Lauer
Address: 523 E. 2nd Ave	Project Name & #: Jone Petroleum Contamination 0504-058-01
City: Spokane State: WA Zip: 99202	Email Address: DLauer@geoengineers.com
Phone: 509-363-3125	Purchase Order #:
Fax: 363-3126	Sampler Name & phone: Kevin L Randall 435-764-7169

Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp

X Normal __Next Day* __2nd Day* __Other*_____ *All rush order requests must be prior approved.

__Phone __Mail __Fax __Email

Provide Sample Description / List Analyses Requested / Note Special Instructions/Comments

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative	NWTPH-Gx	VOCs by EPA 8260B or 8021
11	MW-15-080411	8/4/11 1016	W	5			X	X
12	CabinGrill-080411	8/4/11 1640		3			X	X
13	Duplicate-1	8/4/11 1234					X	X
14	Trips *						X	X

Inspection Checklist

Received Intact?	(Y)	N
Labels & Chains Agree?	(Y)	N
Containers Sealed?	(Y)	N
VOC Head Space?	Y	(N)

Land Lab / Courier

Temperature (°C): 4.2°
Preservative: HCl
Date & Time: 8/5/11
Inspected By: KES

	Printed Name	Signature	Company	Date	Time
Relinquished by	Kevin Randall	Kevin Randall	GEI	8/5/11	1040
Received by	K Leuth	K Leuth	Anatek	8/5	1040
Relinquished by					
Received by					
Relinquished by					
Received by					

APPENDIX D
Report Limitations and Guidelines for Use

APPENDIX D
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has performed this Supplemental Site Characterization of the Ione Petroleum Contamination site located in Ione, Washington in general accordance with the Work Plan, dated April 9, 2010. This report has been prepared for the exclusive use of the Washington Department of Ecology. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. No one except the Washington State Department of Ecology should rely on this environmental report without first conferring with GeoEngineers. Use of this report is not recommended for any purpose or project except the one originally contemplated.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the Ione Petroleum Contamination site located in Ione, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made to the project or property after the date of this report, we recommend that GeoEngineers be given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

Our report was prepared for the exclusive use of our Client. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. This is to provide our

1 Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Environmental Regulations Are Always Evolving

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Phase II ESA is Completed

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. We are unable to assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location or its reuse on-site in instances that we did not know or could not control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration

identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ, sometimes significantly, from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but separating logs from the report can create a risk of misinterpretation.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. Without this understanding, there may be expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you need to know more about how these "Report Limitations and Guidelines for Use" apply to your project or property.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

Have we delivered World Class Client Service?
Please let us know by visiting **www. geoengineers.com/feedback**.

GeoEngineers