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REMEDIAL INVESTIGATION ADDENDUM

Site:
North Colfax Petroleum Contamination Site
North Main Street and East Tyler Street
Colfax, Washington

Prepared for:
The North Colfax Group

Report Date:
March 16, 2012

Remedial Investigation Addendum

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North Colfax Petroleum Contamination Site
North Main Street and East Tyler Street
Colfax, Washington

Project No.: 0592-001-01

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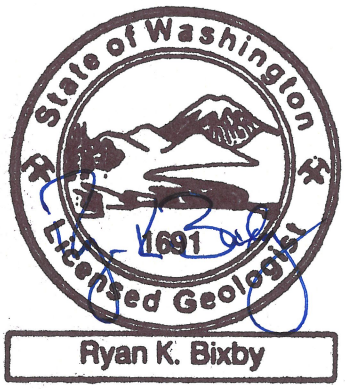

SoundEarth Strategies

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ACRONYMS AND ABBREVIATIONS

µg/L	micrograms per liter
bgs	below ground surface
BOD	biochemical oxygen demand
COD	chemical oxygen demand
Colfax Grange	Colfax Grange Supply Company, Inc.
DRPH	diesel-range petroleum hydrocarbons
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FS/DCA	Feasibility Study/Disproportionate Cost Analysis
GPAWP	Groundwater Potability Assessment Work Plan
GRPH	gasoline-range petroleum hydrocarbons
MNA	monitored natural attenuation
MTCA	Washington State Model Toxics Control Act
NAEWP	Natural Attenuation Evaluation Work Plan
North Colfax Group	PetroSun Fuel, Inc. (currently Pacific Convenience & Fuel, LLC); TOC Holdings Co. (formerly Time Oil Co.); CHS, Inc.; and Colfax Grange Supply Company, Inc., collectively
NWTPH	Northwest Total Petroleum Hydrocarbon
ORPH	oil-range petroleum hydrocarbons
OSHA	Occupational Safety and Health Administration
PCS	petroleum-contaminated soil
PID	photoionization detector
RIA	Remedial Investigation Addendum
RI Report	*Remedial Investigation Report, North Colfax Petroleum Contamination Site, North Main Street and East Tyler Street, Colfax, Washington,* prepared by SoundEarth Strategies, Inc., and dated January 4, 2010

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SAP	Sampling and Analysis Plan
SCM-RIWP	Site Conceptual Model and Remedial Investigation Work Plan
SES	Sound Environmental Strategies Corporation
the Site	the full lateral and vertical extent of contamination that has resulted from the former and current operation of retail gasoline service stations on the properties located along the east side of North Main Street, at the northeast corner of its intersection with East Harrison Street and on the northeast and southeast corners of its intersection with East Tyler Street in Colfax, Washington
SoundEarth	SoundEarth Strategies, Inc.
SRI	supplemental remedial investigation
SRIWP	Supplemental Remedial Investigation Work Plan
TDS	total dissolved solids
VOC	volatile organic compound
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

SoundEarth Strategies, Inc. (formerly Sound Environmental Strategies Corporation) has prepared this Remedial Investigation Addendum for the North Colfax Petroleum Contamination Site, located at the intersection of North Main Street and East Tyler Street in Colfax, Washington (the Site), on behalf of PetroSun Fuel, Inc. (currently Pacific Convenience & Fuel, LLC); TOC Holdings Co. (formerly Time Oil Co.); CHS, Inc.; and Colfax Grange Supply Company, Inc. (Colfax Grange); collectively, the North Colfax Group. The Remedial Investigation Addendum was prepared in general accordance with the Washington State Model Toxics Control Act promulgated in the Washington Administrative Code Chapter 173-340-350.

The Site, as it is currently defined, is comprised of an area that includes several tax parcels that are currently occupied or have historically been occupied by gasoline stations. These properties are located along the east side of North Main Street where it intersects with East Tyler Street and East Harrison Street, and they are referred to in this report as the Time Oil, Cenex, and Colfax Grange properties.

The purpose of the Remedial Investigation Addendum is to address data gaps identified by the Washington State Department of Ecology in its review of the Draft Feasibility Study/Disproportionate Cost Analysis that was prepared by SoundEarth Strategies, Inc., dated September 27, 2010. These data gaps included the following:

- **The potential risk for vapor intrusion**. SoundEarth Strategies, Inc. concluded that the potential risk for vapor intrusion into the residences located proximal to the Site was very low and that the vapor intrusion pathway appeared incomplete. However, the Washington State Department of Ecology noted that the northeasterly extent of impacts encountered in boring SP11 had not been defined and that "There is not sufficient evidence through sample analysis to make the determination that the vapor pathway is incomplete."
- **The potability of the near-surface aquifer.** Although the near-surface aquifer in the vicinity of the Site has reportedly been adversely impacted by the widespread use of fertilizers and other agricultural applications and does not appear to be hydrologically connected to the underlying deeper aquifer that supplies the City of Colfax with its drinking water supply, the Washington State Department of Ecology concluded that empirical evidence in the form of laboratory testing would be required in order to demonstrate that the highest beneficial use of the near-surface aquifer is not as a potable water source, as defined in Washington Administrative Code 173-340-720(2).
- **The appropriateness of monitored natural attenuation as a remedial alternative for the Site.** The Washington Administrative Code 173-340-370(7) requires, among other things, that for monitored natural attenuation to be considered as an appropriate remedial alternative, there must be (1) evidence to show that natural biodegradation or chemical degradation is occurring and will continue to occur at a reasonable rate at the Site and (2) that appropriate monitoring requirements are conducted to ensure that the natural attenuation process is taking place and that human health and the environment are protected. The Washington State Department of Ecology concluded that additional information regarding the groundwater parameters was necessary in order to demonstrate that monitored natural attenuation was an appropriate remedial alternative for the Site.

To address these data gaps, SoundEarth Strategies, Inc., completed supplemental investigation activities, which included soil sampling and analysis to address soil vapor intrusion concerns, as well as groundwater sampling and analyses to evaluate the potability and natural attenuation characteristics of groundwater beneath the Site. The soil sampling event was performed on August 16, 2010, and the groundwater sampling occurred concurrent with the Third Quarter 2010, Fourth Quarter 2010, First Quarter 2011, and Second Quarter 2011 monitoring events.

The results of the supplemental subsurface investigation, which included advancing borings SP18 and SP19 and collecting and analyzing selected soil samples from the borings, did not indicate detectable concentrations of gasoline-, diesel-, or oil-range petroleum hydrocarbons in any of the soil samples submitted for analysis, nor did the exposed soil exhibit evidence of contamination, such as stains, odors, or significant photoionization detector readings. The current risk for vapor intrusion at the Site is not significant and does not warrant additional investigation for the following reasons:

- Evidence of impacts, such as petroleum staining and odors, significant photoionization detector readings, or elevated concentrations of petroleum hydrocarbons, was not encountered in soil samples collected from either of the borings (SP18 and SP19) advanced to the north and east of monitoring well MW09, where impacts had previously been encountered. As such, the petroleum contamination encountered beneath other portions of the Site does not extend to the vicinity of the off-Site residences.
- The residences located to the northeast of monitoring well MW09 and east of boring SP02 (those within 100 feet of petroleum-contaminated soil associated with the Site) are constructed with crawlspaces that would further mitigate the risk of vapor intrusion.
- The fact that the Time Oil and Cenex properties are operating gas stations negates the need for further evaluation of these properties since the Washington State Department of Ecology 2009 draft guidance document *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* indicates that Occupational Safety and Health Administration regulations apply to these properties. As stated in Section 1.2 of the Washington State Department of Ecology 2009 draft guidance document, worker exposure to use of chemicals of concern is greater than the risk associated with vapor intrusion.
- The risk of vapor intrusion into the Colfax Grange building is mitigated by the absence of volatile organic compounds (benzene) in soil and groundwater, as stated in Section 1.4.1 of the Washington State Department of Ecology draft guidance document.

The results of the groundwater potability evaluation analyses indicated that the groundwater samples collected from the monitoring wells on the Site are not significantly impacted by nitrates and nitrites, oxygen-consuming chemicals, or bacteria. Acknowledging these findings, the soil-to-groundwater pathway beneath the Site is considered by the Washington State Department of Ecology to be complete and drinking water is considered the highest beneficial use of the near-surface aquifer beneath the Site.

The source removal actions conducted at the Site between 1999 and 2006 have resulted in substantial reductions in contaminant concentrations in groundwater. The continued decrease in concentrations since those excavations were completed, coupled with the results of monitored natural attenuation

parameter sampling, provides evidence that natural attenuation is occurring in the groundwater beneath the Site. Additionally, the results of this assessment suggest that chemicals conditions are such that, if contaminants from residual soil impacts were to leach into the groundwater, natural attenuation processes would degrade these contaminants at a reasonable rate. Based on the primary and secondary lines of evidence, the oil-range petroleum hydrocarbon concentrations encountered in groundwater proximal to monitoring well MW26 are anticipated to continue to decline and remain below the Washington State Model Toxic Control Act Method A cleanup level in approximately Fourth Quarter 2012. As such, monitored natural attenuation is a viable cleanup alternative for petroleum-contaminated groundwater beneath the Site and will meet the minimum requirements for cleanup actions under Washington Administrative Code 173-340-360(2).

This executive summary is presented solely for introductory purposes, and the information contained in this section should be used only in conjunction with the full text of this report. A complete description of the project, Site conditions, investigative methods, and investigation results is contained within this report.

1.0 INTRODUCTION

SoundEarth Strategies, Inc. (SoundEarth; formerly Sound Environmental Strategies Corporation [SES]) has prepared this Remedial Investigation Addendum (RIA) for the North Colfax Petroleum Contamination Site (Figure 1), located at the intersection of North Main Street and East Tyler Street in Colfax, Washington (the Site), on behalf of PetroSun Fuel, Inc. (currently Pacific Convenience & Fuel, LLC); TOC Holdings Co. (formerly Time Oil Co.); CHS, Inc.; and Colfax Grange Supply Company, Inc. (Colfax Grange); collectively, the North Colfax Group. This RIA was prepared for submittal to the Washington State Department of Ecology (Ecology), and it was developed to address data gaps identified by Ecology in its review of the Draft Final Feasibility Study/Disproportionate Cost Analysis (FS/DCA) prepared by SoundEarth and dated October 14, 2011 (SoundEarth 2011b), pursuant to Ecology's Agreed Order No. DE 4599, dated July 11, 2007. The RIA was prepared in general accordance with the Washington State Model Toxics Control Act (MTCA) promulgated in the Washington Administrative Code Chapter 173-340-350 (WAC 173-340-350).

As established in WAC 173-340-200, the "Site" is defined by the full lateral and vertical extent of contamination that has resulted from the former and current operation of retail gasoline service stations on the properties located along the east side of North Main Street, where it intersects with East Tyler Street and East Harrison Street and on the northeast and southeast corners of its intersection with East Tyler Street. These properties are referred to in this report as the Time Oil, Cenex, and Colfax Grange properties. The current Site boundary definition is depicted on Figure 2.

1.1 DOCUMENT PURPOSE

The purpose of this RIA is to address data gaps identified by Ecology in its review of the Draft FS/DCA of the Site (SoundEarth 2011b), which included the following:

- **The potential risk for vapor intrusion**. SoundEarth concluded that the potential risk for vapor intrusion into the residences located proximal to the Site was very low and that the vapor intrusion pathway appeared incomplete. However, Ecology noted that the northeasterly extent of impacts encountered in boring SP11 had not been defined and that "There is not sufficient evidence through sample analysis to make the determination that the vapor pathway is incomplete."
- **The potability of the near-surface aquifer.** The near-surface aquifer in the vicinity of the Site has reportedly been adversely impacted by the widespread use of fertilizers and other agricultural applications and does not appear to be hydrologically connected to the underlying deeper aquifer that supplies the City of Colfax with its drinking water supply. Therefore, Ecology concluded that empirical evidence in the form of laboratory testing would be required in order to demonstrate that the highest beneficial use of the near-surface aquifer is not as a potable water source, as defined in WAC 173-340-720(2).
- **The appropriateness of monitored natural attenuation as a remedial alternative for the Site.** WAC 173-340-370(7) requires, among other things, that for monitored natural attenuation (MNA) to be considered as an appropriate remedial alternative, there must be (1) evidence to show that natural biodegradation or chemical degradation is occurring and will continue to occur at a reasonable rate at the Site and (2) that appropriate monitoring requirements are conducted to ensure that the natural attenuation process is taking place

and that human health and the environment are protected. Ecology concluded that additional information regarding the groundwater parameters was necessary in order to demonstrate that MNA was an appropriate remedial alternative for the Site.

1.2 SCOPE OF WORK

The scope of work for the RIA was developed in order to address the data gaps identified above and included the tasks outlined in the following Ecology-approved work plans completed by SoundEarth:

- Supplemental Remedial Investigation Work Plan (SRIWP), dated July 30, 2010 (SES 2010b)
- Groundwater Potability Assessment Work Plan (GPAWP), dated July 30, 2010 (SES 2010c)
- Natural Attenuation Evaluation Work Plan (NAEWP), dated July 30, 2010 (SES 2010d)

The work was performed in general accordance with Site Conceptual Model and Remedial Investigation Work Plan (SCM-RIWP), dated January 21, 2008 (SES 2008a).

1.3 SITE LOCATION AND DESCRIPTION

The Site has previously been described in detail in the Remedial Investigation Report (RI Report; SES 2010a) and Draft FS/DCA (SoundEarth 2011b). The Site is generally located near the intersection of North Main Street and East Tyler Street in Colfax, Washington, and includes all of the former Time Oil property, the Cenex property, a portion of the Colfax Grange property, and portions of North Main Street and East Tyler Street. The current Site boundary definition is depicted on Figure 2.

2.0 SUPPLEMENTAL REMEDIAL INVESTIGATION

The activities performed as part of the supplemental remedial investigation (SRI) are described in the following sections. The analytical results of the soil and groundwater samples are summarized on Tables 1, 2, and 3. Boring locations for the SRI are graphically depicted on Figure 2, and the monitoring well locations are shown on Figures 2 and 3.

2.1 PRE-FIELD ACTIVITIES

Before sampling activities were conducted, traffic control plans were prepared, street use permits were acquired, and public and private utility locates were conducted. Utility maps from the Colfax Public Works Department were also reviewed to identify proposed sample locations that might intersect or otherwise interfere with known utility corridors.

Subcontractors that provided services on the project included a private utility locator (Utilities Plus, Inc.), a drilling contractor (ESN Northwest, Inc.), traffic control signage provider (National Barricade), and Ecology-accredited analytical laboratories (Friedman & Bruya, Inc., Fremont Analytical Inc., Anatek Labs, Inc., Aquatic Research Incorporated, and Am Test, Inc.). Prior to conducting the fieldwork, a Health and Safety Plan was prepared for use during the subsurface soil and groundwater sampling activities.

2.2 SOIL SAMPLING

A description of the soil sampling activities conducted in the course of the SRI is provided below.

2.2.1 Subsurface Soil Samples

On August 16, 2010, SoundEarth oversaw the advancement of two push-probe borings (SP18 and SP19) to the north and east of monitoring well MW09 for the purposes of collecting, screening, and submitting soil samples for analytical testing (Figure 2). The borings were advanced using a push-probe drill rig to depths of approximately 13 and 11 feet below ground surface (bgs), respectively.

Relatively undisturbed soil samples were obtained from the borings throughout the maximum depths explored using the procedures described in the Sampling and Analysis Plan (SAP) of the SCM-RIWP (SES 2008a) and the SRIWP (SES 2010b). Selected portions of each recovered soil core sample were placed in a plastic bag so that the presence or absence of volatile organic compounds (VOCs) could be quantified using a photoionization detector (PID). Intervals of each recovered soil core were placed into laboratory-prepared glassware in accordance with U.S. Environmental Protection Agency (EPA) Method 5035A. Subsurface lithology was classified using the Unified Soil Classification System; boring logs are included in Appendix A.

Two soil samples were collected from each boring and were submitted for analytical testing. In accordance with the SAP, soil samples not exhibiting obvious signs of impacts were to be analyzed for gasoline-, diesel-, and oil-range petroleum hydrocarbons (GRPH, DRPH, and ORPH, respectively) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-HCID. Soil samples exhibiting obvious signs of petroleum impacts (such as staining, odors, or significant PID readings) and/or detectable concentrations per Method NWTPH-HCID were to be analyzed for GRPH by Method NWTPH-Gx; DRPH and ORPH by Method NWTPH-Dx; and benzene, toluene, ethylbenzene, total xylenes, and VOCs by EPA Methods 8021B and/or 8260B.

2.2.2 Deviations from the SCM-RIWP and SRIWP

The work was performed without deviation from the SCM-RIWP and SRIWP.

2.3 GROUNDWATER SAMPLING

On August 18 and 19, 2010, and concurrent with the Third Quarter 2010 groundwater monitoring event, groundwater samples were also collected from selected monitoring wells and submitted for supplemental analyses to evaluate the potability of the underlying near-surface aquifer at the Site. Groundwater samples were also collected from selected monitoring wells concurrent with the Third Quarter 2010, Fourth Quarter 2010, First Quarter 2011, and Second Quarter 2011 groundwater monitoring and sampling events and analyzed for natural attenuation parameters. The groundwater sampling was performed in general conformance with the SAP and the Quality Assurance Project Plan presented in the SCM-RIWP and the respective work plans. Copies of groundwater purge and sample forms from the monitoring events are included in Appendix B.

2.3.1 Groundwater Potability Evaluation

In general, groundwater is considered a source of drinking water unless specific criteria described in WAC 173-340-720(2) can be demonstrated, which include the following:

- The groundwater is not a current source of drinking water.
- The groundwater is not a potential drinking water source for any of the following reasons:

- The well cannot produce a sustainable yield of greater than 0.5 gallons per minute.
- The groundwater contains natural background concentrations of organic or inorganic constituents that make use of the water as a drinking water source not practicable.

Although the information contained in the RI Report confirmed that the near-surface groundwater in the vicinity of the Site is not a current source of drinking water, several of the wells at the Site are capable of producing a sustainable yield of 0.5 gallons per minute, which means that the groundwater could potentially be used as a source of drinking water in the future. In an effort to evaluate whether the presence of elevated concentrations of organic or inorganic constituents could impact the potability of the near-surface aquifer that underlies the Site, SoundEarth sampled groundwater from eight monitoring wells (MW02, MW05, MW08, MW09, MW12, MW13, MW21, and MW25) and submitted the groundwater samples for analysis of quality/potability parameters, including total dissolved solids (TDS), fecal coliform, biochemical oxygen demand (BOD), chemical oxygen demand (COD), nitrates, and nitrites. BOD is used as an indirect way to assess the presence of organic waste in water by measuring the oxygen used by microorganisms to decompose such waste. COD is used to indirectly assess the presence of contaminants that cannot be oxidized biologically. Additionally, downwell parameters, including pH, specific conductivity, and dissolved oxygen, were obtained from field measurements.

2.3.2 Deviations from the GPAWP

The work was performed without deviation from the SCM-RIWP and GPAWP.

2.3.3 Natural Attenuation Evaluation

To evaluate whether natural attenuation of petroleum hydrocarbons is occurring and will likely continue to occur at the Site, SoundEarth monitored groundwater for natural attenuation parameters for four consecutive quarters, from August 2010 through May 2011. Specifically, SoundEarth collected groundwater samples from monitoring wells MW02, MW12, MW13, MW25, MW26, and CMW05 during the Third Quarter 2010 groundwater monitoring event, and additionally sampled wells MW01 and MW07 for the three subsequent events. The groundwater samples were analyzed for the following geochemical indicator parameters:

- Nitrate and nitrite by Standard Method 184500N03F and EPA Method 353.2, respectively
- Sulfate and sulfide by Standard Method 184500SO4E and EPA Method 376.1, respectively
- Alkalinity by Standard Method 18 2320B
- Ferrous iron by Standard Method 3500
- Total iron and manganese by EPA Method 200.7
- Total Kjehldahl Nitrogen by EPA Method 351.1
- Total phosphorus by EPA Method 365.1
- Dissolved methane by EPA Method RSK-175

In addition, field parameters were collected in support of natural attenuation including pH, oxidation-reduction potential, conductivity, and dissolved oxygen. Groundwater samples collected from monitoring wells MW02, MW12, MW13, MW25, MW26, and CMW05 were initially selected for analysis of geochemical indicator parameters because the monitoring wells are located upgradient, within, and downgradient of the historical petroleum hydrocarbon plume, in accordance with the recommendations of the 2005 Ecology guidance document *Guidance to Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation* (Ecology 2005). Wells MW03 and MW07 were added for the last three quarterly episodes to better evaluate areas within the central portion of the former contaminant plume. Analytical results and field parameters for the natural attenuation evaluation are presented in Table 3.

2.3.4 Deviations from the NAEWP

Groundwater samples were not analyzed for manganese^{+2} for any of the four MNA sampling events, as was originally outlined in the NAEWP. Based upon our conversation with Freidman & Bruya, Inc., one of the subcontracted laboratories (SoundEarth 2010), the concentration of manganese^{+2} is calculated by analyzing both unfiltered and field filtered samples for total manganese; the difference of the results is considered representative of manganese^{+2} content. Acknowledging the relatively low turbidity values recorded during purging of the sampled wells, the difference of filtered versus unfiltered results was assumed to be negligible. Therefore, for the purposes of this evaluation, the total manganese concentration was considered representative of the concentration of manganese^{+4} and the concentration of manganese^{+2} was considered to be negligible. This deviation did not affect the findings or conclusions of this investigation. There were no other significant deviations from the SCM-RIWP or NAEWP.

3.0 RESULTS

The analytical results of the soil and groundwater samples are summarized on Tables 1, 2, and 3. Boring locations for the SRI are graphically depicted on Figure 2, and the monitoring well locations are shown on Figures 2, 3, and 4.

3.1 SOIL RESULTS

Borings SP18 and SP19 exhibited debris-laden, silty sand to sandy silt that was interpreted to be non-native fill material to depths of 2 to 4 feet bgs. The fill material was underlain by damp to wet silt that extended to depths of approximately 9.5 feet bgs in boring SP18 and to 10 feet bgs in boring SP19. The silt was underlain by silty sand and gravel to the maximum depths explored of 13 and 11 feet, respectively. The soil did not exhibit obvious signs of contaminant impacts, such as staining, sheens, odors, or significant PID readings. Boring logs are included in Appendix A.

Soil samples SP18-4-5, SP18-9-10, SP19-3-4, and SP19-7-8 were analyzed for GRPH, DRPH, and ORPH by Method NWTPH-HCID, and none of the samples exhibited concentrations of GRPH, DRPH, and ORPH that exceeded the laboratory's lower reporting limit. As such, no additional analyses of these samples were performed. Analytical results are summarized on Table 1.The analytical laboratory reports are included in Appendix C.

3.2 GROUNDWATER RESULTS

The following subsections provide a summary of the groundwater potability and natural attenuation data collected from August 2010 through May 2011.

3.2.1 Groundwater Potability Evaluation

The results of the supplemental groundwater testing revealed that groundwater samples collected from seven of the eight monitoring wells in August 2010 exhibited pH levels that were below the level established by the EPA as acceptable for drinking water, and the groundwater collected from monitoring well MW12 exhibited an exceedance of the TDS standard. However, the test results for nitrate, nitrite, and fecal coliform were in compliance with state and/or federal regulations. Elevated BOD and COD concentrations were not encountered. Analytical test results and downwell parameters are summarized on Table 2, and analytical laboratory reports are included in Appendix C.

3.2.2 Natural Attenuation Evaluation—Groundwater

The primary line of evidence supporting natural attenuation of petroleum hydrocarbons in groundwater at the Site is the significant shrinking in the magnitude and extent of the petroleum contaminant plumes that have been observed during the course of the remedial investigation (Section 5.5.2 of the RI Report; SES 2010a). With the exception of a single groundwater sample collected from monitoring well MW26, none of the groundwater samples collected from the Site have contained concentrations of COCs in excess of their respective MTCA Method A cleanup levels during any of the four most recent quarterly groundwater monitoring events.

The evaluation of the secondary line of evidence for natural attenuation of petroleum hydrocarbons at the Site includes measuring groundwater parameters in the field and collecting groundwater samples and analyzing them for additional geochemical indicators. This secondary line of evidence was evaluated in order to assess the mechanisms of natural attenuation and, in combination with the primary line of evidence, to demonstrate that groundwater conditions beneath the Site are likely to result in the restoration of groundwater with a reasonable time frame. Analytical results and field parameters are summarized on Table 3, analytical laboratory reports are included in Appendix C, and groundwater elevation contours for the May 16, 2011, monitoring event are shown on Figure 3.

The secondary line of evidence supporting natural attenuation of petroleum hydrocarbons was evaluated through a comparison of the geochemical indicator concentrations in groundwater collected from the excavation areas on the Cenex and Time Oil properties, as well as locations upgradient and downgradient of these source areas. This comparison revealed low positive-to-negative oxidation reduction potential, relatively low dissolved oxygen concentrations, and an increase in ferrous iron concentrations in groundwater collected in vicinity of the excavations on the Cenex and Time Oil properties (monitoring wells MW02, MW03, MW07, MW12, MW13, MW26, and CMW05) relative to the concentrations in groundwater collected from upgradient and downgradient locations (monitoring wells MW25 and MW13, respectively). These findings indicate that iron-reducing conditions exist beneath the Site that are conducive to the degradation of petroleum hydrocarbons. Although the current rate of degradation is diminished due to the relatively low concentrations of residual petroleum hydrocarbons in soil and groundwater beneath the Site, the available information suggests that if petroleum

hydrocarbons were to leach into groundwater from the residual petroleum-contaminated soil (PCS) at an increased rate, groundwater beneath the Site has the capacity to attenuate the increased mass of contamination.

Although concentrations of ORPH in groundwater samples collected from monitoring well MW26 have periodically exceeded the MTCA Method A cleanup level, the secondary line of evidence confirms that groundwater conditions at monitoring well MW26 can support the degradation of ORPH (SoundEarth 2011a). This conclusion is based on the presence of electronic donors and receptors in groundwater samples collected from monitoring well MW26 that are necessary for the biologically mediated degradation of ORPH.

SoundEarth also performed a regression analysis in an effort to estimate the time frame that may be required for ORPH concentrations to attenuate to the point that they do not seasonally increase above the MTCA Method A cleanup level. Acknowledging the relative limited amount of data available for ORPH concentrations in groundwater from monitoring well MW26 (ORPH has only been detected at a concentration exceeding the MTCA Method A cleanup level during three of the quarterly monitoring events and the concentration has not been more than twice the cleanup level during any monitoring event), the regression analysis incorporated the analytical results from each well on the Site in which ORPH has been detected since January 2007, which was the first monitoring event performed after the excavation on the Cenex property. A best-fit-line was created for the regression observed at each of these monitoring wells (MW01, MW09, MW17 through MW19, MW25, MW26, MW29, MW32, and CMW03) and this Site-averaged best-fit-line was applied to the highest concentration of ORPH historically detected in monitoring well MW26. As shown in Chart 1, applying the Site-averaged regression line to the highest concentration of ORPH historically detected in monitoring well MW26 (830 micrograms per liter [µg/L] in the sample collected on March 9, 2010) suggests that the seasonally-elevated ORPH concentrations detected in MW26 will fall and remain below the MTCA Method A cleanup level of 500 µg/L in approximately Fourth Quarter 2012. Since the ORPH concentrations detected in monitoring wells MW20, MW21, MW30, and MW31 are not associated with a release at the Site, these results were not included in the averaged best-fit-line.

In summary, the results of quarterly groundwater monitoring confirm that the plumes of petroleum hydrocarbon contamination beneath the Site are shrinking and that, with one exception, groundwater beneath the Site has been compliant with MTCA Method A cleanup levels for four or more consecutive quarters of monitoring. Secondary lines of evidence demonstrate that biodegradation of petroleum hydrocarbons is still occurring in areas where impacts have historically been present beneath the Site and that the rate of biodegradation is equal or greater to the rate of dissolution from the residual PCS. Based on the primary and secondary lines of evidence, it appears that groundwater throughout the Site will be restored by late 2012, which is considered a reasonable time frame. Although the actual remedial time frame may vary, acknowledging that the highest concentration of ORPH detected to date in groundwater collected from monitoring well is less than twice the MTCA Method A cleanup level, even a remedial time frame of 5 years would be considered reasonable.

4.0 VAPOR INTRUSION CONSIDERATIONS

As summarized in Section 3.1 of this report, soil samples were collected from borings SP18 and SP19 to resolve the uncertainty regarding the extent of impacts encountered in boring SP11, and the potential existence of a vapor intrusion pathway into the residences located to the north of East Tyler Street and east of the Time Oil property. The soil samples collected from borings SP18 and SP19 did not exhibit concentrations of GRPH, DRPH, or ORPH that exceeded the laboratory's lower reporting limit, and evidence of petroleum hydrocarbon impacts, including staining, odors, or significant PID readings, was not observed in soil samples collected from any of the borings. As such, the potential risk for vapor intrusion is very low. Furthermore, the residential buildings are constructed with vented crawl spaces, rather than slab-on-grade or basements, which greatly reduces the risk of potential vapor intrusion to the residential buildings.

The primary locations of residual VOCs (benzene impacts) include the western portion of the Time Oil property and the former tank locations on the Cenex property. Both the Time Oil and Cenex properties are operating gas stations. As stated in Section 1.2 of the 2009 Ecology draft guidance document *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*, worker exposure to the use of chemicals of concern is greater than the risk associated with vapor intrusion, and worker safety is regulated by both the Washington Department of Labor and Industries and the Occupational Safety and Health Administration (OSHA) regulations. Therefore, as is stated in Section 1.2 of the 2009 Ecology draft guidance document, the vapor intrusion guidance does not apply to these portions of the Site since worker exposure to use of chemicals of concern is greater than the risk associated with vapor intrusion (Ecology 2009).

Finally, the risk of vapor intrusion into the Colfax Grange building is mitigated by the absence of benzene in soil and groundwater (Section 5.8.3 of RI Report [SES 2010a]). As stated in Section 1.4.1 of the 2009 Ecology draft guidance document, "if the chemicals present at the site are not sufficiently toxic and volatile, there is no further need to evaluate the pathway."

5.0 CONCLUSIONS

The current risk for vapor intrusion at the Site is not significant and does not warrant additional investigation for the following reasons:

- Evidence of impacts, such as petroleum staining and odors, significant PID readings, or elevated concentrations of petroleum hydrocarbons, was not encountered in soil samples collected from either of the borings (SP18 and SP19) advanced to the north and east of monitoring well MW09, where impacts had previously been encountered. As such, the petroleum contamination encountered beneath other portions of the Site does not extend to the vicinity of the off-Site residences.
- The residences located to the northeast of monitoring well MW09 and boring SP02 (those within 100 feet of the PCS) are constructed with crawlspaces that would further mitigate the risk of vapor intrusion.
- The fact that the Time Oil and Cenex properties are operating gas stations negates the need for further evaluation of these properties since the Ecology 2009 draft guidance document indicates that OSHA regulations apply to these properties. As stated in Section 1.2 of the

Washington State Department of Ecology 2009 draft guidance document, worker exposure to use of chemicals of concern is greater than the risk associated with vapor intrusion.

- The risk of vapor intrusion into the Colfax Grange building is mitigated by the absence of VOCs (benzene) in soil and groundwater.

The potential risk of impacts to indoor air within buildings at or near the Site is very low, and this pathway is considered incomplete. No additional investigation regarding this pathway is warranted.

The results of the groundwater potability evaluation did not reveal concentrations of organic or inorganic constituents that would make the use of the near-surface groundwater as a drinking water source impracticable. Although the near-surface groundwater beneath the Site is not currently used as a drinking water source, the available information does not adequately demonstrate that the groundwater could not be used as a source of drinking water in the future, per WAC 173-340-720(2). Therefore, drinking water is considered to be the highest beneficial use of the near-surface groundwater beneath the Site and the soil-to-groundwater pathway is considered complete.

The source removal actions conducted at the Site between 1999 and 2006 have resulted in substantial reductions in contaminant concentrations in groundwater. The continued decrease in concentrations since those excavations were completed, coupled with the initial results of MNA parameter sampling, provides evidence that natural attenuation is occurring in groundwater beneath the Site. In addition, the results of this assessment suggest that chemical conditions are such that, if contaminants from residual soil impacts were to leach into the groundwater, natural attenuation processes would degrade these contaminants at a reasonable rate. Based on the primary and secondary lines of evidence, the ORPH concentrations encountered in groundwater proximal to monitoring well MW26 are anticipated to continue to decline and remain below the MTCA Method A cleanup level in approximately Fourth Quarter 2012. As such, MNA is a viable cleanup alternative for petroleum-contaminated groundwater beneath the Site and will meet the minimum requirements for cleanup actions under WAC 173-340-360(2).

6.0 BIBLIOGRAPHY

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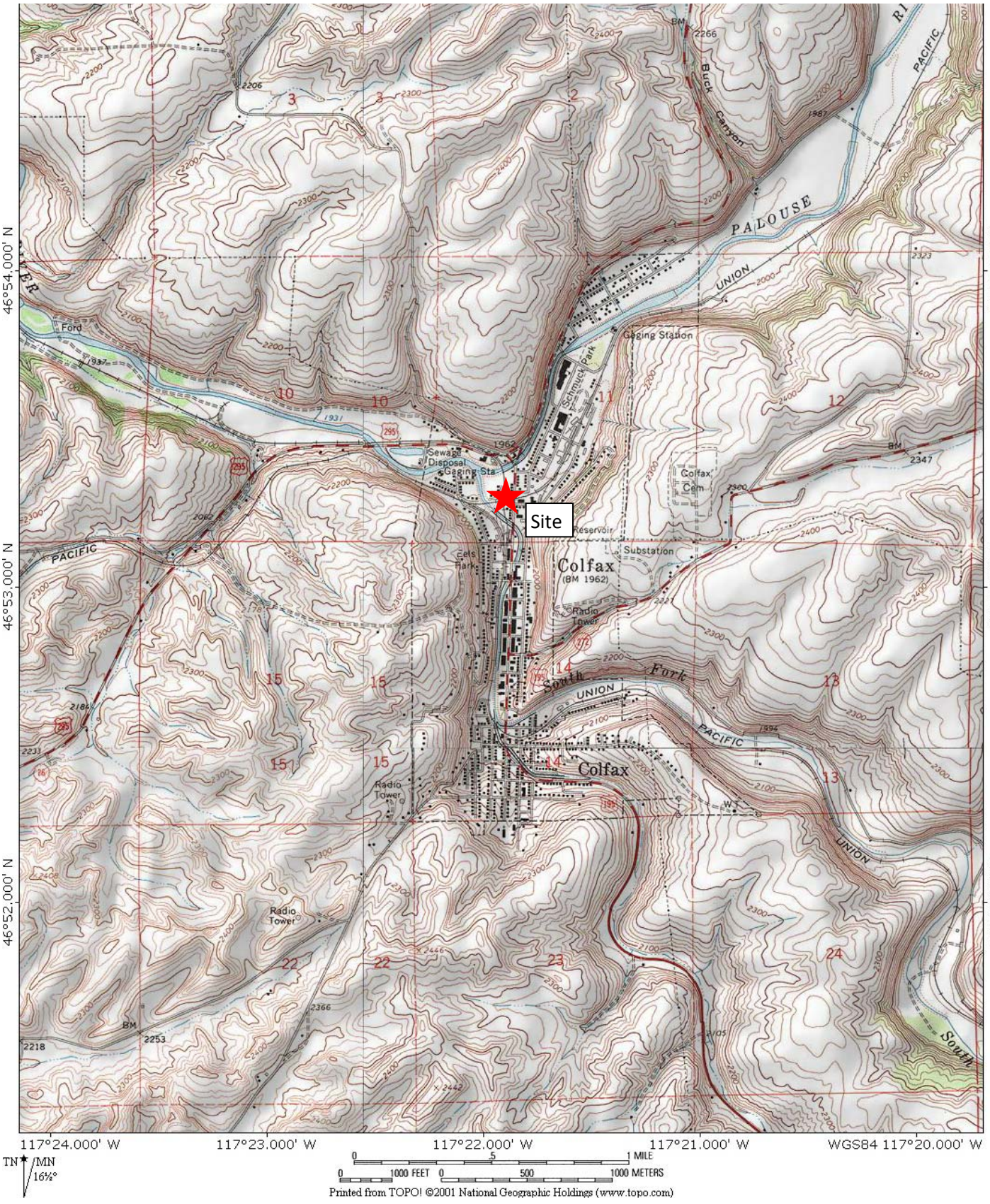
7.0 LIMITATIONS

The findings and conclusions documented in this report were prepared for the specific application to this project and were developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. A potential always remains for the presence of unknown, unidentified, or unforeseen subsurface contamination on portions of the property not sampled, such as under buildings. No warranty, expressed or implied, is made. This report is for the exclusive use of the North Colfax Group and its representatives.

FIGURES



SoundEarth Strategies	N	Date: August 19, 2008 Drawn By: RLH Chk By: RKB Project No.: 0592-001 File ID: 0592_fig1_to.doc	North Colfax Petroleum Contamination Site North Main Street and East Tyler Street Colfax, Washington	**FIGURE 1** Site Location Map

3/16/2012

N

SIDEWALK

B32

B15/MW15

FORMER PUMP ISLAND

B14

B14A/MW14

STERLING PROPERTY

SIDEWALK

MW11

B13/MW13

B27/MW27

NORTH MAIN STREET (U.S. HIGHWAY 195)

FORMER GAS & OIL STATION

B28/MW28

SEWER MANHOLE

B26/MW26

FORMER BURIED OIL DRUMS

STORM DRAIN

SP04

PLANTER

SP03

SP06

PLANTER

SIDEWALK

PLANTER

MW05

SP05

MW06

MW07

TIME OIL PROPERTY

B22/MW22

GEOENGINEERS 1999 EXCAVATION

SP01

CONCRETE

B24/MW24

TP01

TP03

TP02

B16/MW16

CENEX PROPERTY

SP16

MW12

B23/MW23

SP12

T6/9

T7/9

T9/9

FORMER GREASE ROOM

UTILITY POLE

SUL BTM COMP SOUTH

SP09

SP08

MW03

MW04

DISPENSER ISLANDS

FORMER GREASE PITS

TACO TIME RESTAURANT

B25/MW25

B29/MW29

COLFAX GRANGE PROPERTY (105 EAST HARRISON STREET)

CMW01

DISPENSER ISLAND

MW01

T3/9

T6/9

T4/9

T1/12

T5/9

COUGAR MART (804)

GRAVEL LOT

RESIDENCE

SP15

MW10

B17/MW17

P4

N1

SP17

FORMER GAS & OIL STATION

B33/MW32

CMW02

CMW05

SP11

MW02

VAULT

MW08

ALLEY

FORMER HEATING OIL UST

P1

UL BTM COMP

N2

MW09

SP19

SP07

CONCRETE SLAB

COLFAX GRANGE BUILDING

FORMER 1968 VINTAGE UST

T2

CMW04

RESIDENCES

ASPHALT-PAVED LOT

EAST HARRISON STREET

PARKING

CONCRETE

OTE-E2

OTE-SE1

SP14

SP18

EAST TYLER STREET

EAST 1ST STREET

FORMER ASTs (KEROSENE, SOLVENTS, AND STOVE OIL)

SP10

B18/MW18

NTE-M

NTE-NE

CT-DW CARD WEST 3

CLOSED-IN-PLACE UST

QUANTUM 2006 EXCAVATION

NTE-SE

CMW03

SP12

SP13

DIESEL PUMP ISLAND

SUMP

CT-GE CARD EAST 3

B19/MW19

GASOLINE UST

B21/MW21

B20/MW20

NORTH MORTON STREET

B30/MW30

B31/MW31

MANHOLE

SHELL PROPERTY

FORMER SHELL OIL COMPANY

RESIDENCE

COLFAX GRANGE BUILDING NO. 2

EASTERN COLFAX GRANGE PROPERTY

RV PARK

HARLO APARTMENTS

LEGEND

- B13/MW13 — MONITORING WELL (SOUNDEARTH 2008-2009)
- MW04 — MONITORING WELL (GEI 2001-2002)
- CMW05 — MONITORING WELL (QE 2004)
- CMW01 — DECOMMISSIONED MONITORING WELL
- SP09 — PUSH-PROBE BORING (SOUNDEARTH 2008)
- SP19 — PUSH-PROBE BORING (SOUNDEARTH 2010)
- T6/9 — EXCAVATION SOIL SAMPLES (GEI 1999)
- OTE-E2 — EXCAVATION SOIL SAMPLES (QE 2006)
- TP03 — TEST PIT (SOUNDEARTH 2009)
- RAILROAD
- PROPERTY BOUNDARIES
- REVISED SITE BOUNDARY
- WATER LINE
- SANITARY SEWER LINE
- STORMWATER LINE
- ANCESTRAL DRAINAGE
- FORMER EXCAVATIONS
- FORMER FEATURES
- SHALLOW GROUNDWATER FLOW DIRECTION (MAY 16, 2011)
- AST — ABOVEGROUND STORAGE TANK
- GEI — GEOENGINEERS, INC.
- QE — QUANTUM ENGINEERING
- UST — UNDERGROUND STORAGE TANK
- ESTIMATED CURRENT EXTENT OF PETROLEUM-CONTAMINATED SOIL AND GROUNDWATER BENEATH THE SITE

1996 1998 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

Q1 Q1 Q1 Q3 Q1 Q3 Q1 Q3 Q1 Q3 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1

PROJECT TIMELINE

TIMELINE LEGEND | GROUNDWATER MONITORING | EXCAVATION | TANK REMOVAL | WELL INSTALLATION | WELL DECOMMISSION | SUBSURFACE INVESTIGATION

SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

DATE: 06/22/11
DRAWN BY: NAC/JQC
CHECKED BY: RKB
CAD FILE: 0592_2010RIA_SBD

PROJECT NAME: NCPC SITE
PROJECT NUMBER: 0592-001
STREET ADDRESS: NORTH MAIN STREET AND EAST TYLER STREET
CITY, STATE: COLFAX, WASHINGTON

REGION:

0 30 60 120
APPROXIMATE SCALE IN FEET

FIGURE 2
SITE BOUNDARY DEFINITION

P:\0592 NORTH COLFAX GROUP\TECHNICAL\CAD\2010RIA\0592_2010RIA_SBD_F.DWG

SOUNDEARTHINC.COM

3/16/2012

N

STERLING PROPERTY

STERLING SAVINGS BANK (805)

FORMER MOBILE SERVICE STATION

RESIDENCE (811)

RESIDENCE (803)

VACANT COMMERCIAL BUILDING (801)

SUBWAY RESTAURANT

PALOUSE RIVER

WEST RAILROAD AVENUE

SIDEWALK

FORMER PUMP ISLAND

B14A/MW14

B15/MW15 (1,890.69)

B27/MW27 (1,889.90)

MW11 (1,889.02)

B13/MW13 (1,888.81)

1,890.00'

1,889.00'

1,889.50'

NORTH MAIN STREET (U.S. HIGHWAY 195)

FORMER GAS & OIL STATION

FORMER BURIED OIL DRUMS

B28/MW28 (1,891.09)

1,891.00'

SEWER MANHOLE

STORM DRAIN

B26/MW26 (1,890.70)

PLANTER

SIDEWALK

B24/MW24 (1,891.11)

B16/MW16 (1,891.28)

CENEX PROPERTY

B23/MW23 (1,891.28)

MW12 (1,891.86)

MW05 (1,890.96)

MW06 (1,890.72)

GEOENGINEERS 1998 EXCAVATION

8K UST

MW07 (1,889.61)

TIME OIL PROPERTY

B22/MW22 (1,888.95)

CONCRETE

1,892.00'

1,890.00'

TACO TIME RESTAURANT

B25/MW25 (1,892.50)

UTILITY POLE

MW03 (1,891.09)

12K UST

8K UST

MW04 (1,891.00)

DISPENSER ISLANDS

MW01 (1,890.82)

FORMER GREASE ROOM

FORMER GREASE PITS

FORMER GAS & OIL STATION

COUGAR MART (804)

GRAVEL LOT

RESIDENCE

COLFAX GRANGE PROPERTY (105 EAST HARRISON STREET)

B29/MW29 (1,892.30)

CMW01

B17/MW17 (1,891.24)

MW10 (1,891.27)

CMW05 (1,891.29)

B33/MW32 (1,892.61)

FORMER HEATING OIL UST

CMW02 (1,891.29)

MW02 (1,891.27)

VAULT

MW08 (1,889.55)

ALLEY

CMW04 (1,891.30)

MW09 (1,891.31)

ASPHALT-PAVED LOT

EAST HARRISON STREET

CONCRETE SLAB

COLFAX GRANGE SUPPLY COMPANY, INC. BUILDING

FORMER 1985 VINTAGE USTs

CONCRETE

B18/MW18 (1,891.33)

UST

DISPENSER ISLAND

EAST TYLER STREET

RESIDENCES

1,890.00'

EAST 1ST STREET

PARKING

FORMER ASTs (KEROSENE, SOLVENTS, AND STOVE OIL)

CLOSED-IN-PLACE UST

CMW03 (1,892.51)

SUMP

B19/MW19 (1,892.33)

DIESEL PUMP ISLAND

GASOLINE UST

1,892.00'

1,891.00'

B21/MW21 (1,891.77)

B20/MW20 (1,891.41)

B30/MW30 (1,891.62)

NORTH MORTON STREET

B31/MW31 (1,891.46)

MANHOLE

SHELL PROPERTY

FORMER SHELL OIL COMPANY

RV PARK

HARLO APARTMENTS

RESIDENCE

LEGEND

- B13/MW13 — MONITORING WELL (SOUNDEARTH 2008-2009)
- MW04 — MONITORING WELL (GEI 2001-2002)
- CMW05 — MONITORING WELL (QE 2004)
- CMW01 — DECOMMISSIONED MONITORING WELL
- RAILROAD
- PROPERTY BOUNDARIES
- WATER LINE
- SANITARY SEWER LINE
- STORMWATER LINE
- ANCESTRAL DRAINAGE
- FORMER EXCAVATIONS
- FORMER FEATURES
- SHALLOW GROUNDWATER FLOW DIRECTION (MAY 16, 2011)
- 1.0-FOOT-INTERVAL GROUNDWATER CONTOUR
- (1,888.81) — GROUNDWATER SURFACE ELEVATION
- AST — ABOVEGROUND STORAGE TANK
- GEI — GEOENGINEERS, INC.
- QE — QUANTUM ENGINEERING, INC.
- UST — UNDERGROUND STORAGE TANK
- 12K — 12,000-GALLON
- 8K — 8,000-GALLON
- 6K — 6,000-GALLON

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DATE: 06/06/11
DRAWN BY: JQC
CHECKED BY: RKB
CAD FILE: 0592_2010RIA_CM

PROJECT NAME: NCPC SITE
PROJECT NUMBER: 0592-001
STREET ADDRESS: NORTH MAIN STREET AND EAST TYLER STREET
CITY, STATE: COLFAX, WASHINGTON

REGION:

0 30 60 120
APPROXIMATE SCALE IN FEET

FIGURE 3
GROUNDWATER CONTOUR MAP
(MAY 16, 2011)

P:\0592 NORTH COLFAX GROUP\TECHNICAL\CAD\2010RIA\0592_2010RIA_CM_F.DWG

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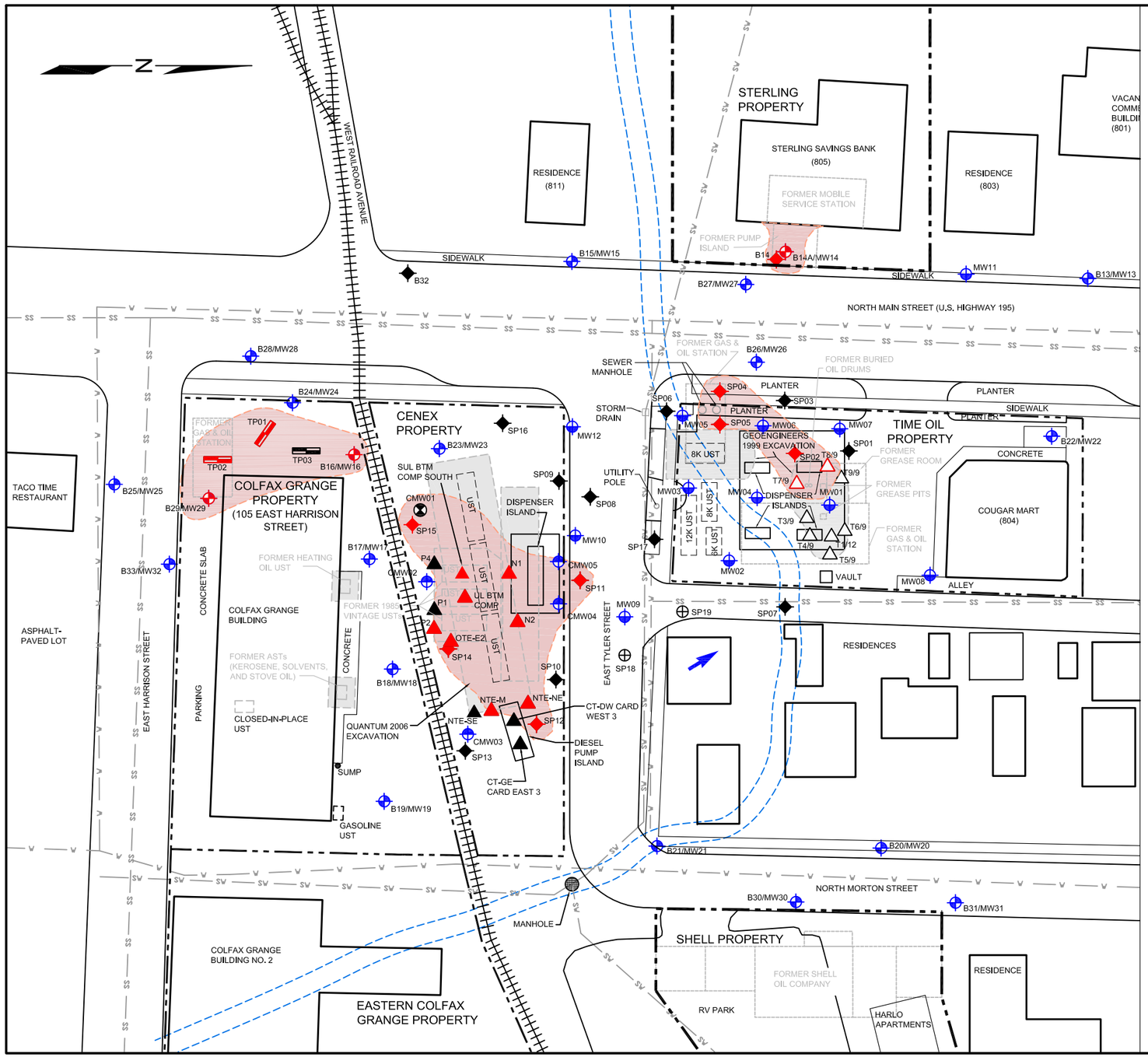
3/16/2012



Sample Location	Sample Depth (feet)	ORPH	DRPH	Analytical Results (milligrams per kilogram) GRPH	Benzene	MTBE[5]	Lead	Naphthalenes	cPAHs
T7/9	9	**2,770**	<25	—	—	—	—	—	—
T8/9	9	**3,260**	<25	—	—	—	—	—	—
N1	11	<100	465	**642**	**0.099**	<0.025	—	—	—
N2	11	<100	<25	**46.2**	**0.058**	<0.025	—	—	—
UL BTM COMP	10	—	—	**1,230**	<0.264	<2.11	—	—	—
SUL BTM COMP S	10	—	—	**188**	<0.0530	<0.025	—	—	—
P2	9-11	43.6	898	**145**	<0.0267	<0.025	—	—	—
OTE-E2 -11	11	<100	<25	7.1	**0.063**	<0.010	—	—	—
NTE-M/6-9	6-9	<100	<25	<2.50	**0.044**	<0.025	—	—	—
NTE-NE/6-9	6-9	<100	<25	4.29	**0.228**	<0.025	—	—	—
SP02	3-4	<250	150	**670**	**1.6**	—	11.5	—	—
	7-8	<250	850	**3,300**	**3.3**	**2.0**	31.7	**9.3**	0.00755
	13-14	<250	<50	<2	<0.02	—	1.97	—	—
SP04	7-8	<250	<50	**34**	<0.02	—	31.2	—	—
	10-11	<250	160	**1,100**	<0.02	—	9.82	—	—
	12-13	<250	<50	<2	<0.02	—	2.33	—	—
SP05	7-8	<250	1,200	**2,400**	<0.03	<0.05	36.7	**9.1**	0.00755
	10-11	<250	120	**280**	<0.02	—	9.4	—	—
	13-14	<250	<50	<2	<0.02	—	1.96	—	—
SP11	3-4	<250	<50	11	**0.37**	—	**339**	—	—
	5-6	<250	<50	6	**0.29**	<0.05	7.11	<0.01	0.00755
	9.5-10.5	<250	<50	2	<0.02	—	6.69	—	—
SP12	6.5-8	<250	<50	<2	<0.02	—	6.62	—	—
	10-12	<250	<50	**140**	**0.034**	<0.05	5.75	0.12	0.00755
	13-14	<250	<50	**66**	<0.02	—	13.9	—	—
	14-15	<250	<50	<2	<0.02	—	—	—	—
SP14	4.5-5.5	<250	<50	3.0	**0.11**	—	6.43	—	—
	7-8	<250	<50	<2	**0.074**	<0.05	6.02	<0.01	0.00755
	13-14	<250	<50	<2	<0.02	—	3.14	—	—
SP15	6-7	<250	<50	3.0	**0.21**	<0.05	10.9	<0.01	0.00755
	10-11	<250	<50	<2	0.03	—	5.18	—	—
B14	7-8	<250	<50	<2	<0.02	<0.05	18.1	—	—
	11-12	<250	<50	**140**	—	—	1.75	0.070	0.00755
	13-14	<250	<50	**84**	<0.02	—	1.38	—	—
B14A	7.5	<250	230	24	<0.03	<0.05	4.55	<0.05	—
	10	<250	260	**1,300**	<0.03	<0.05	10.4	**8.1**	0.00755
B16	6-7	<250	<50	<2	<0.02	—	6.33	—	—
	11-12	<250	<50	**140**	<0.03	<0.05	5.26	<0.01	0.00755
	14-15	<250	<50	<2	<0.02	—	4.71	—	—
B29	4	<250	<50	<20	—	—	—	—	—
	11	<250	<50	**310**	<0.02	—	6.18	—	—
	15	<250	<50	<20	—	—	—	—	—
TP01	7	<250	<50	<20	—	—	—	—	—
	12	<250	390[X]	**700**	<0.03	<0.05	5.13	<0.05	0.00755
TP02	9.5	<250	<50	<20	—	—	—	—	—
	12.5	<250	<50	**190**	<0.03	<0.05	4.01	<0.05	—
MTCA Method A		**2,000**	**2,000**	**30**	**0.03**	**0.1**	**250**	**5**	**0.1**

LEGEND

- B13/MW13 MONITORING WELL (SOUNDEARTH 2008-2009)
- MW04 MONITORING WELL (GEI 2001-2002)
- CMW05 MONITORING WELL (QE 2004)
- CMW01 DECOMMISSIONED MONITORING WELL
- SP09 PUSH-PROBE BORING (SOUNDEARTH 2008)
- SP19 PUSH-PROBE BORING (SOUNDEARTH 2010)
- T6/9 EXCAVATION SOIL SAMPLES (GEI 1999)
- OTE-E2 EXCAVATION SOIL SAMPLES (QE 2006)
- TP03 TEST PIT (SOUNDEARTH 2009)
- RAILROAD
- PROPERTY BOUNDARIES
- WATER LINE
- STORMWATER LINE
- SANITARY SEWER LINE
- 12K 12,000-GALLON
- 8K 8,000-GALLON
- 6K 6,000-GALLON
- AST ABOVEGROUND STORAGE TANK
- GEI GEOENGINEERS, INC.
- ANCESTRAL DRAINAGE
- FORMER EXCAVATIONS
- FORMER FEATURES
- ESTIMATED EXTENT OF PCS
- SHALLOW GROUNDWATER FLOW DIRECTION (MAY16, 2011)

GRPH GASOLINE-RANGE PETROLEUM HYDROCARBONS
MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
MTBE METHYL TERTIARY-BUTYL ETHER
ORPH OIL-RANGE PETROLEUM HYDROCARBONS
PCS PETROLEUM-CONTAMINATED SOIL
QE QUANTUM ENGINEERING, INC.
RED DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL FOR SOIL
UST UNDERGROUND STORAGE TANK
< CONCENTRATION BELOW LABORATORY REPORTING LIMIT
-- NOT ANALYZED

SoundEarth Strategies
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DATE: 07/01/11
DRAWN BY: NAC/JQC
CHECKED BY: RKB
CAD FILE: 0592_2010RIA_SD

PROJECT NAME: NCPC SITE
PROJECT NUMBER: 0592-001
STREET ADDRESS: NORTH MAIN STREET AND EAST TYLER STREET
CITY, STATE: COLFAX, WASHINGTON

REGION:

0 30 60 120
APPROXIMATE SCALE IN FEET

FIGURE 4
SOIL ANALYTICAL RESULTS

P:\0592 NORTH COLFAX GROUP\TECHNICAL\CAD\2010RIA\0592_2010RIA_SD_F.DWG

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TABLES

Table 1
Summary of Soil Analytical Results
North Colfax Petroleum Contamination Site
Colfax, Washington

Sample Location	Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results[1] (mg/kg)		
				GRPH	DRPH	ORPH
SP18	SP18-4-5	08/16/10	4-5	<20	<50	<250
	SP18-9-10	08/16/10	9-10	<20	<50	<250
SP19	SP19-3-4	08/16/10	3-4	<20	<50	<250
	SP19-7-8	08/16/10	7-8	<20	<50	<250
MTCA Method A Soil Cleanup Level[2]				**100/30[a]**	**2,000**	**2,000**

NOTES:

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

[1]Analyzed by Northwest Total Petroleum Hydrocarbon Method Method HCID.

[2]MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

[a]Cleanup level for GRPH is 100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

< = not detected at concentration exceeding the laboratory reporting limit

bgs = below ground surface

DRPH = diesel-range petroleum hydrocarbons

GRPH = gasoline-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

ORPH = oil-range petroleum hydrocarbons

SoundEarth Strategies

Table 2
Summary of Groundwater Analytical Results for Potable Groundwater Parameters
North Colfax Petroleum Contamination Site
Colfax, Washington

Well ID	Date Collected	Analytical Results								
		Nitrate[1] (mg/L)	Nitrite[2] (mg/L)	Fecal Coliform[3] (MPN/100 mL)	Total Dissolved Solids[4] (mg/L)	COD[5] (mg/L)	BOD[6] (mg/L)	pH[7]	Dissolved Oxygen[7] (mg/L)	Specific Conductivity[7] (mS/cm)
MW02	08/18/10	0.015	<0.002	<2	365	<10.0	4.90	**5.72**	0.43	0.617
MW05	08/18/10	0.065	0.006	<2	412	<10.0	2.66	**5.43**	0.92	0.611
MW08	08/18/10	5.88	0.043	<2	477	<10.0	<2.00	**5.32**	0.38	0.807
MW09	08/18/10	0.021	<0.002	<2	304	14.7	<2.00	**5.90**	0.30	0.601
MW12	08/18/10	0.092	0.003	<2	**557**	<10.0	<2.00	**4.63**	0.25	1.028
MW13	08/18/10	0.190	0.002	<2	397	<10.0	<2.00	**5.42**	0.25	0.667
MW21	08/18/10	0.018	0.002	<2	389	10.8	3.16	6.58	0.37	0.785
MW25	08/18/10	0.014	<0.002	<2	357	<10.0	<2.00	**5.34**	0.20	0.629
EPA National Drinking Water Regulations[8]		**10[a]**	**1[a]**	**0[a]**	**500[b]**	**NE**	**NE**	**6.5-8.5[b]**	**NE**	**NE**

NOTES:

Red denotes concentration exceeds EPA National Drinking Water Regulations MCL.

Samples analyzed by AmTest, Inc., Aquatic Research Incorporated, and Anatek Labs, Inc.

[1]Analyzed by Method SM 184500N03F.

[2]Analyzed by EPA 353.2.

[3]Analyzed by Method SM 9221E.

[4]Analyzed by Method SM 18 2540C.

[5]Analyzed by Method SM 18 5220D.

[6]Analyzed by Method SM 5210B.

[7]Values obtained using a Horiba or YSI water quality meter.

[a]MCLs for contaminants listed under EPA's National Primary Drinking Water Regulations, Title 40, Chapter 1, Part 141 of the CFR. Revised July 1, 2002.

[b]MCLs for contaminants listed under EPA's National Secondary Drinking Water Regulations, Title 40, Chapter 1, Part 143 of the CFR. Revised July 1, 2002.

< = not detected at concentration exceeding the laboratory reporting limit

BOD = biological oxygen demand

CFR = U.S. Code of Federal Regulations

COD = chemical oxygen demand

EPA = U.S. Environmental Protection Agency

MCL = EPA Maximum Cleanup Level

mg/L = milligrams per liter

MPN/100mL = most probable number per 100 milliliters

mS/cm = milliSiemens per centimeter

NE = not established

TDS = total dissolved solids

SM = standard method

Table 3
Summary of Groundwater Analytical Results for Natural Attenuation Parameters
North Colfax Petroleum Contamination Site
Colfax, Washington

Well ID	Date Collected	Analytical Results												Groundwater Quality Parameters[13]			
		Sulfate[1] (mg/L)	Sulfide[2] (mg/L)	Total Iron[3] (mg/L)	Ferrous Iron[4] (mg/L)	Ferric Iron[5] (mg/L)	Manganese[6] (mg/L)	Nitrate[7] (mg/L)	Nitrite[8] (mg/L)	TKN[9] (mg/L)	Total Phosphorous[10] (mg/L)	Alkalinity[11] (mg $CaCO_3$/L)	Dissolved Methane[12] (mg/L)	pH	Specific Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW02	08/18/10	13.2	<0.05	17.7	0.01	17.7	5.97	0.015	<0.002	0.682	0.892	259	--	5.63	0.950	0.43	-94
	11/17/10	16.4	<0.05	5	3.2	2	4.42	0.024	<0.002	1.02	1.58	190	0.268	6.38	0.557	1.10	-106
	02/16/11	26	<0.1[a]	1.51	<0.01	<1.51	0.676	2.38	<0.05	0.570	0.151	230	0.0063	6.66	0.611	1.08	67
	05/19/11	<0.5	<0.1	0.774	0.06	0.71	0.801	<0.3	<0.3	0.215	0.051	160	<0.00500	6.39	0.5338	1.73	108
MW03	11/18/10	15.1	<0.05	7	2	5	6.13	0.02	<0.002	0.995	1.12	240	0.153	6.01	0.636	0.97	-69
	02/17/11	13	<0.1[a]	12.3	0.08	12.2	6.98	0.120	<0.05	0.903	0.682	240	0.064	6.81	0.613	0.39	-36
	05/18/11	10	<0.1	13.5	6.12	7.4	7.71	0.39	<0.3	0.325	0.699	240	0.031	6.80	0.8298	0.50	-60
MW07	11/18/10	9.49	<0.05	7.6	1.4	6.2	4.24	0.060	0.005	1.17	0.972	260	0.109	5.75	0.297	3.69	-31
	02/15/11	16	<0.1[a]	24.0	0.06	23.9	5.39	<0.05	<0.05	1.08	0.950	290	0.065	7.42	0.528	0.68	-61
	05/18/11	9.6	<0.1	24.3	9.92	14.4	5.24	0.558	<0.3	0.431	1.24	290	0.032	7.04	0.8504	0.52	-121
MW12	08/18/10	25.7	<0.05	4.03	0.03	4.00	8.85	0.092	0.003	0.451	0.202	415	--	6.67	0.971	0.25	57.2
	11/17/10	26.1	<0.05	3.8	2.9	1.1	12.9	0.120	0.002	0.891	0.182	310	<0.005	6.28	0.094	0.82	-18
	02/16/11	20	<0.1[a]	2.00	0.02	1.98	6.41	0.726	<0.05	1.00	0.166	310	<0.0013	6.52	0.863	1.29	143
	05/18/11	22	<0.1	3.02	1.28	1.74	8.24	0.63	<0.3	0.279	0.06	360	<0.00500	7.00	1.026	0.81	-12
MW13	08/18/10	5.03	<0.05	10.1	0.03	10.1	2.00	0.190	0.002	0.439	0.208	311	--	6.78	0.713	0.25	-21.5
	11/17/10	7.50	<0.05	4.5	2.3	2.2	2.22	0.882	0.004	0.764	0.205	260	0.176	6.11	0.720	0.92	5
	02/16/11	8.9	<0.1[a]	3.13	0.02	3.11	1.10	1.76	<0.05	0.704	0.167	190	0.032	6.48	0.486	0.82	76
	05/18/11	8.2	<0.1	3.68	0.34	3.34	0.706	2.1	<0.3	0.273	0.237	190	0.0305	6.80	0.5973	0.84	36
MW25	08/18/10	8.50	<0.05	1.17	0.13	1.04	8.00	0.014	<0.002	0.664	0.425	369	--	6.91	0.620	0.20	8.3
	11/17/10	6.81	<0.05	0.2	0.0	0.2	7.81	0.688	0.003	1.01	0.222	190	0.091	6.01	0.591	0.73	32
	02/15/11	3.9	<0.1[a]	1.35	0.03	1.32	8.86	<0.05	<0.05	1.10	0.287	240	0.180	6.86	0.591	0.57	55
	05/19/11	6.9	<0.1	2.48	1.7	0.8	9.01	<0.3	<0.3	0.478	0.35	230	0.0827	6.63	0.7008	0.63	47
MW26	08/19/10	11.8	<0.05	16.0	0.09	15.9	5.87	0.031	0.002	0.774	1.24	352	--	5.72	0.999	0.36	-127
	11/17/10	10.6	<0.05	10	4	6	4.94	0.016	<0.002	1.31	1.32	320	0.164	6.60	0.791	0.66	-101
	02/16/11	11	<0.1[a]	20.4	0.03	20.4	4.42	<0.05	<0.05	1.60	1.00	280	0.082	7.12	0.751	0.25	-33
	05/17/11	13	<0.1	17.8	7.68	10.1	4.92	<0.3	<0.3	0.511	0.934	280	0.044	7.12	0.8448	0.46	-120
CMW05	08/18/10	22.4	<0.05	9.39	0.07	9.32	5.10	0.017	<0.002	0.280	1.55	449	--	7.06	0.972	0.16	-90.8
	11/17/10	19.8	<0.05	6.5	4.6	1.9	3.44	0.015	<0.002	0.756	0.799	420	0.030	6.55	0.936	0.68	-86
	02/17/11	20	<0.1[a]	5.25	0.01	5.24	2.74	<0.05	<0.05	<0.1	0.388	350	0.0046	6.93	0.687	0.57	-18
	05/17/11	19	<0.1	7.56	5.26	2.30	3.44	0.312	<0.3	0.284	0.669	310	0.00842	7.24	0.9443	0.46	-63

NOTES:

Samples analyzed by AmTest, Inc., of Kirkland, Washington; Aquatic Research Inc.; and/or Fremont Analytical of Seattle, Washington.

[1]Analyzed by Method SM184500SO4E.

[2]Analyzed by EPA Method 376.1 or EPA 300.0.

[3]Analyzed by EPA Method 200.7 or 200.8 and/or in the field by SoundEarth personnel using Hach® Total Iron Kit, FerroVer Method 8008.

[4]Analyzed by Method SM 3500, with exception of samples collected on November 17 and 18, 2010, which were analyzed in the field by SoundEarth personnel using Hach® Ferrous Iron Kit, 1-10 Phenanthroline Method 8146.

[5]Ferric iron = Total iron–Ferrous iron.

[6]Analyzed by EPA Method 200.7 or 200.8.

[7]Analyzed by Method SM184500N03F or EPA 300.0.

[8]Analyzed by EPA Method 353.2 or 300.0.

[9]Analyzed by EPA Method 351.1 or 351.2.

[10]Analyzed by EPA Method 365.1 or SM 4500-PE.

[11]Analyzed by Method SM18 2320B.

[12]Analyzed by EPA Method RSK-175.

[13]Parameter measured in the field by SoundEarth personnel using down-hole water quality meter.

[14]Analyzed by Method SM18 2540C.

[15]Analyzed by Method SM18 5220D.

[16]Analyzed by Method SM18 5210B.

[a]Concentration reported as hydrogen sulfide.

-- not analyzed

< = not detected at concentration exceeding the laboratory reporting limit

> = concentration exceeded maximum detection limit. Reported result is an estimate

µs/cm = microSeimens per centimeter

EPA = U.S. Environmental Protection Agency

mg/L = milligrams per liter

$mgCaCO_3$/L= milligrams of calcium carbonate per liter

mV = millivolts

ORP = oxidation-reduction potential

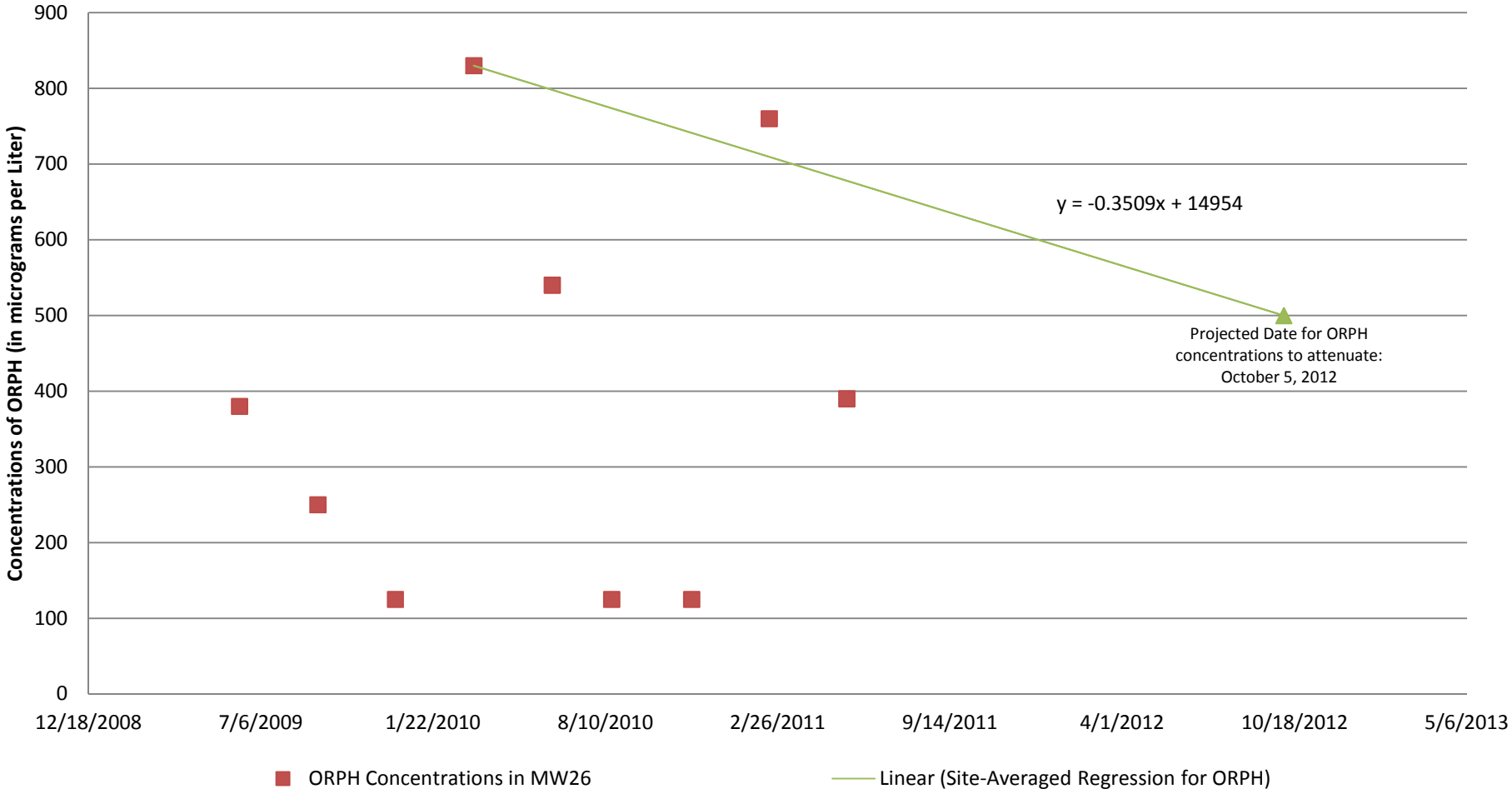
SM = standard method

SoundEarth = SoundEarth Strategies, Inc.

TKN = total Kjeldahl nitrogen

CHART

Chart 1
Concentrations of ORPH in Groundwater from Monitoring Well MW26:
Observed and Predicted
North Colfax Petroleum Contamination Site
Colfax, Washington



Approach: Concentrations of ORPH in groundwater collected from monitoring wells MW01, MW09, MW17, MW18, MW25, MW26, MW32, and CMW03 were plotted on independent charts. The dataset for each monitoring well included the first instance of detected ORPH concentrations in a groundwater sample collected since January 2007, as well as any subsequent results from that well. When ORPH results were reported below the laboratory detection limit, half the detection limit was used as the resultant concentration. Using this data, a regression line was calculated and plotted for each monitoring well's dataset. Using the slopes from each regression line, an average slope was calculated and used in a y-intercept line equation. This equation was then plotted on the chart for concentrations of ORPH in groundwater from monitoring well MW26. The highest concentration of ORPH (830 micrograms per liter) was used as the starting concentration/time and was used to predict the duration of time until concentrations of ORPH attenuated to below MTCA Method A Cleanup level of 500 micrograms per liter.

APPENDIX A
BORING LOGS

SoundEarth Strategies

Project: NCPC Site
Project Number: 0592-001
Logged by: DMM
Date Started: 8/16/2010
Surface Conditions: Asphalt
Well Location N/S: 20' East of MW09
Well Location E/W: --
Reviewed by: CCC
Date Completed: 8/16/2010

BORING LOG | SP18

Site Address: North Main St & East Tyler St
Colfax, Washington

Water Depth At Time of Drilling 10.5 feet bgs
Water Depth After Completion 9.5 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			60			FILL		**FILL: Asphalt, brick remnants, and brown/black/red mottled silt with fine-grained sand, no hydrocarbon odor.**	
			66	2.8	SP18-4-5	ML		**Damp, SILT, with trace fine sand, dark brown, no hydrocarbon odor (95-5-0).**	
5				1.7	SP18-6-7				
			60	0.2					
					SP18-9-10	SP		**Wet, silty fine to coarse SAND, brown, no hydrocarbon odor (15-85-0).**	
10						GP		**Wet, GRAVEL, with coarse sand, gray-brown/black, no hydrocarbon odor (0-10-90).**	
			150	1.1	SP18-12-13				
								Refusal at 13' bgs. Boring backfilled with ~1/2 bag of hydrated bentonite chips.	
15									

Drilling Co./Driller: ESN
Drilling Equipment: Push-Probe
Sampler Type: --
Hammer Type/Weight: -- lbs
Total Boring Depth: 13 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: NCPC Site
Project Number: 0592-001
Logged by: DMM
Date Started: 8/16/2010
Surface Conditions: Gravel
Well Location N/S: 30' North of MW09
Well Location E/W: --
Reviewed by: CCC
Date Completed: 8/16/2010

BORING LOG | SP19

Site Address: North Main St & East Tyler St
Colfax, Washington

Water Depth At Time of Drilling 8 feet bgs
Water Depth After Completion 9 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						FILL		**FILL: Asphalt/sand/silt mottled black/brown/red, no hydrocarbon odor.**	
			40			ML		**Damp to moist, SILT, with fine sand, brown to dark brown, no hydrocarbon odor (85-15-0).**	
				2.6	SP19-3-4				
5				1.9	SP19-5-6				
			88						
				1.8	SP19-7-8	ML		**Moist to wet, SILT, with fine sand, brown, no hydrocarbon odor (80-20-0).**	
			66			GM		**Gradational: Moist to wet, gravelly SILT, brown/gray mottled, no hydrocarbon odor (55-10-35).**	
10				3.9	SP19-10-11	GP		**Moist to wet, sandy GRAVEL, coarse sand, dark gray, no hydrocarbon odor (0-15-85).**	
								Refusal at 11' bgs. Boring backfilled with ~1/2 bag of hydrated bentonite chips.	
15									

Drilling Co./Driller:	ESN		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	Push-Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	11	feet bgs	**Surface Seal:**	--		
Total Well Depth:	--	feet bgs	**Annular Seal:**	--		
State Well ID No.:	--		**Monument Type:**	--		

APPENDIX B
GROUNDWATER PURGE AND SAMPLE FORMS

Groundwater Purge and Sample Forms for Third Quarter 2010

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC Project #: 0592-001
Site: Calfax Site #: ____ Well ID Number: MW12
Field/Sampling Personnel: D. Mendel

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2"	4	6	Casing Volume (WC x CD)	Total Purge Volume
15?	8.88	—	0.041	0.16	0.64	1.44	—	~3L

Water Quality Meter: Type YSI 556 + Turbidimeter ID # ____ Date of Sampling: 8/18/10
Sampling Method: (Peristaltic) Bladder Bailer
Other: ____
Purge/Sampling Method: (Low Flow) Other: ____ Time of Sampling: 1408

Screened Interval: 5-15 Sampling Depth (*approx. the center of saturated screen*): 12'
Time Start Purge: 1349 Time End Purge: 1429

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1353	8.91	0.18	6.56	1.023	24.1	0.83	19.51	79.6
1356	8.91	0.18	6.48	1.012	23.8	0.39	19.16	81.6
1359	8.91	0.18	6.59	0.983	21.6	0.32	18.82	77.1
1402	8.91	0.18	6.65	0.974	19.5	0.27	18.63	74.1
1405	8.91	0.18	6.67	0.971	15.2	0.25	18.58	57.2

Sampling Comments:

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW12-20100818	1 x 250ml AGB	—	(No) 0.45 0.10	N.A. & Petability
	1 x 1L AGB	—	(No) 0.45 0.10	
	2 x 500ml Poly	H2SO4	(No) 0.45 0.10	
	4 x 500ml Poly	—	(No) 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1/2 Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock)
Surface Water Infiltration (if yes, describe)? NO (YES) ⇨
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:
2 stripped bolts

Yes (Monument) Yes No (Well Casing) No

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC
Project #: 0592-001
Site: Colfax
Site #:
Well ID Number: MW25
Field/Sampling Personnel: D. Mendel

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC x CD)	Total Purge Volume
—	7.19	—	0.041	0.16	0.64	1.44	—	~8L

Water Quality Meter: Type YSI 556 + Turbidmeter ID #
Date of Sampling: 8/18/10
Sampling Method: ~~Peristaltic~~ Bladder Bailer
Other:
Purge/Sampling Method: ~~Low Flow~~ Other:
Time of Sampling: 1593

Screened Interval: 5 - 17.5
Sampling Depth (*approx. the center of saturated screen*): 11'
Time Start Purge: 1509
Time End Purge: 1544

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) ~~WL Meter~~ or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1511	7.22	0.24	7.12	0.632	17.7	7.09	19.13	25.1
1514	7.23	0.24	6.91	0.617	7.4	0.37	18.34	14.0
1517	7.23	0.24	6.86	0.618	5.1	0.26	18.13	11.4
1520	7.23	0.24	6.91	0.620	3.5	0.20	18.00	8.3

DM

Sampling Comments: DM

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW25-20100818	1 x 250ml AGB	—	(No) 0.45 0.10	N.A. & Potability
	1 x 1L AGB	—	(No) 0.45 0.10	
DM	2 x 500ml Poly	H2SO4	(No) 0.45 0.10	1
	4 x 500ml Poly	—	(No) 0.45 0.10	

PURGE WATER DISPOSAL NOTES: DM

Total Discharge (1Gal=3.8785Ltr): ~3/4
Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? (NO) YES ⇒ Monument Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes (No)
Additional Well Condition Comments or Explanation of any Access Issues: DM One broken bolt wing.

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

GROUNDWATER PURGE AND SAMPLE FORM

Client: N. Colfax Group Project #: 6592-001-01
Site: NCPC Site #:
Field/Sampling Personnel: AJL Well ID Number: MW02

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2	4	6	Casing Volume (WC X CD)	Total Purge Volume
—	7.95	—	0.041	0.16	0.64	1.44		

Water Quality Meter: Type Horiba ID # SES #3 Date of Sampling: 20100818
Sampling Method: Peristaltic Bladder Bailer
Other:
Purge/Sampling Method: Low Flow Other: Time of Sampling: 1550

Screened Interval: 6-20.5' Sampling Depth (approx. the center of saturated screen): ~13'
Time Start Purge: 1526 Time End Purge: 1542

Time (3-5 min intervals)	Water Level (drawdown <0.33') WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity S/m ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1528	7.96	0.170	5.82	0.097	21.0	9.35	20.2	-45
1531	7.96	0.170	5.51	0.096	121.0	1.15	18.8	-76
1534	7.96	0.130	5.55	0.096	84.8	0.59	18.8	-87
1537	7.96	0.132	5.57	0.096	71.1	0.50	18.8	-90
1541	7.96	0.131	5.63	0.095	65.0	0.43	19.0	-94

8/18/10

Sampling Comments: Settleable solids visible during purging.

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW02-20100818	1 - 250 ml Amber	—	No 0.45 0.10	Natural Attenuation & Potability Assessment
"	1 - 1L Amber	—	No 0.45 0.10	
"	2 - 500 ml poly	H_2SO_4	No 0.45 0.10	
"	4 - 500 ml poly	—	No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~0.48 gal Disposal Method: Drummed Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) Yes No
Surface Water Infiltration (if yes, describe)? NO YES ⇒ Monument: Yes Well Casing: No
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

...e successive readings should be within the indicated parameter limits prior to sampling
...s of measurement are in feet and/or gallons unless otherwise indicated
...atic water level is above the screen, avoid drawdown of water level into the screen

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC Project #: 0592-001
Site: Colfax Site #: —
Well ID Number: MW13
Field/Sampling Personnel: D. Mandel

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches): 1	(2)	4	6	Casing Volume (WC X CD)	Total Purge Volume
20.30	8.55	11.75	0.041	0.16	0.64	1.44	1.88	~3L

Water Quality Meter: Type YSI 556 & Turbidimeter ID # —
Date of Sampling: 6/18/10
Sampling Method: (Peristaltic) Bladder Bailer
Other: —
Purge/Sampling Method: (Low Flow) Other: —
Time of Sampling: 1737

Screened Interval: 5-19.5 Sampling Depth (*approx. the center of saturated screen*): 12'
Time Start Purge: 1723 Time End Purge: 1757

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1725	8.58	0.24	6.90	0.708	22.4	3.27	19.25	-11.3
1728	8.58	0.24	6.85	6.708	15.6	0.41	18.94	-11.5
1731	8.58	0.24	6.82	0.712	9.0	0.29	18.83	-18.2
1734	8.58	0.24	6.78	0.713	7.3	0.25	18.95	-21.5
				DM				

Sampling Comments: DM

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW13-20100818	1x 250ml AGB	—	(No) 0.45 0.10	N.A. & Potability
	1x 1L AGB	—	(No) 0.45 0.10	
Sm	2x 500ml Poly	H2SO4	(No) 0.45 0.10	
	4x 500ml Poly	—	(No) 0.45 0.10	

PURGE WATER DISPOSAL NOTES: DM

Total Discharge (1Gal=3.8785Ltr): ~3/4	Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) / (Monument) / Yes No
Surface Water Infiltration (if yes, describe)? NO (YES) ⇒ Well Casing (No)
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues: DM

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: NCRC
Site: Colfax
Field/Sampling Personnel: D. Mendel

Project #: 0592-001
Site #: —

Well ID Number: CMW05

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC X CD)	Total Purge Volume
—	8.90	—	0.041	0.16	0.64	1.44	—	~3L

Water Quality Meter: Type 457556 + Turbidimeter ID # —
Sampling Method: (Peristaltic) Bladder Bailer
Other: —
Purge/Sampling Method: (Low Flow) Other: —

Date of Sampling: 8/18/10
Time of Sampling: 1855

Screened Interval: 6.5 - 16.5
Sampling Depth (approx. the center of saturated screen): 12'
Time Start Purge: 1840
Time End Purge: 1903

Time (3-5 min intervals)	Water Level (drawdown <0.33') (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1842	8.94	0.25	7.08	0.985	12.14	2.38	18.03	-71.2
1845	8.94	0.25	7.08	0.983	9.72	0.23	17.03	-87.2
1848	8.94	0.25	7.07	0.976	7.68	0.17	16.88	-90.8
1851	8.94	0.25	7.06	0.972	4.24	0.16	16.79	-90.8
				DM				

Sampling Comments: DM

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
CMW05-20100818	1 x 500ml Poly	H2SO4	(No) 0.45 0.10	Nat. Attenuation
DM	3 x 500ml Poly	—	(No) 0.45 0.10	1
			No 0.45 0.10	
			No ~~0.45 0.10~~	

PURGE WATER DISPOSAL NOTES: DM

Total Discharge (1Gal=3.8785Ltr): ~3/4 | Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) Yes (No)
Surface Water Infiltration (if yes, describe)? (NO) YES ⟹ Monument Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes (No)
Additional Well Condition Comments or Explanation of any Access Issues:

One bolt is non-usable and non-removable. Replaced J-plug b/c could not fully secure current one due to lock.

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: N. Colfax Group Project #: 0592-001-01
Site: NCPC Site #:
Field/Sampling Personnel: AJL and D. Mendel Well ID Number: MW26

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	2	4	6	Casing Volume (WC X CD)	Total Purge Volume
—	8.79	17.56	0.041	0.16	0.64	1.44	—	—

Water Quality Meter: Type Horiba ID # SES #3
Sampling Method: Peristaltic Bladder Bailer
Other:
Purge/Sampling Method: Low Flow Other:

Date of Sampling: 20100819
Time of Sampling: 0956

Screened Interval: 5.5' – 18.5' Sampling Depth (*approx. the center of saturated screen*): ~10'
Time Start Purge: 0935 Time End Purge: 0954

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity MS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
0938	8.73	0.16	5.96	53.1	80.3	4.45	18.5	39
0941	8.72	0.16	5.71	87.7	[illegible]12	1.46	18.0	-8.1
0944	8.72	0.16	5.[illegible]67	99.8	73.3	0.78	18.1	-105
0947	8.72	0.16	5.72	99.9	32.4	0.56	18.6	-115
0950	8.72	0.16	5.73	99.9	27.2	0.43	18.1	-122
0953	8.72	0.16	5.72	99.9	18.4	0.~~53~~36	18.2	-127

DM

Sampling Comments:

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW26-20100819	1-500ml poly	H_2SO_4	No 0.45 0.10	Natural Attenuation +
"	3-500ml poly	—	No 0.45 0.10	Perchlorate +
		DM	No 0.45 0.10	
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES: DM

Total Discharge (1Gal=3.8785Ltr): ~0.75 Disposal Method: Drummed Remed. System Other:

Well/Site Condition Information:
Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock). NO YES
Surface Water Infiltration (if yes, describe)?
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

Yes / Monument / Yes No / Well Casing / No

Two bolts missing and wings stripped. Dried (old?) brown streaking down inside of casing.

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Groundwater Purge and Sample Forms for Fourth Quarter 2010

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: _____ Project #: _____
Site: NCPC Site #: NCPC Well ID Number: MW02
Field/Sampling Personnel: Larry Namba

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2	(4)	6	Casing Volume (WC x CD)	Total Purge Volume
20.5	7.64	12.86	0.041	0.16	0.64	1.44	8.23	

Water Quality Meter: Type Quanta ID # 3
Sampling Method: Peristaltic Bladder Bailer
Other: _____
Purge/Sampling Method: Low Flow Other: _____
Date of Sampling: 17 Nov 10
Time of Sampling: 1729
Screened Interval: 10 - 20.5
Sampling Depth (*approx. the center of saturated screen*): 12
Time Start Purge: 1720
Time End Purge:

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1721	7.64		6.89	0.543	107	0.61	13.68	-53
1724	7.64	0.198	6.80	0.555	63.8	0.88	14.24	-76
1727	7.65		6.81	0.554	58.5	0.62	14.43	-84
1730	7.65		6.80	0.554	53.1	0.46	14.53	-86
1733	7.65		6.78	0.555	102.5	0.40	14.56	-87
1736	7.65		6.77	0.554	68.4	0.31	14.70	-89

Sampling Comments:
Hach Test Kits - $Fe = 5.0$ mg/L $Mn = 3.0$ mg/L $Fe^{2+} = 3.6$ mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW02-20101117	2 x 40 mL VOA	HCl	(No) 0.45 0.10	Methane
	1 x 500 mL Poly	~~HNO3~~ H_2SO_4	(No) 0.45 0.10	T. Kjel. Nitr. / Phosporus
	2 x 500 mL Poly	None/None	(No) 0.45 0.10	alk, Nitrite/nate, Sulfate/fide
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr):	Disposal Method: Drummed Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) Yes No
Surface Water Infiltration (if yes, describe)? NO YES ⟹ Monument Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes No
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Drawdown @ 1831 Temp = 15.26 °C
pH = 6.38 ORP = -106 mV
Sp.C. = 55.7 mS/cm D.O = 1.10 mg/L

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC
Site: Colfax
Field/Sampling Personnel: D. Mordel

Project #: 0597-001
Site #: —

Well ID Number: MW03

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	2	(4)	6	Casing Volume (WC X CD)	Total Purge Volume
20.5	7.88	12.62	0.041	0.16	0.64	1.44	2.00	~4L

Water Quality Meter: Type Horiba U-22 ID # 4
Sampling Method: Peristaltic Bladder Bailer
Other: —
Purge/Sampling Method: Low Flow Other: —

Date of Sampling: 11/18/10
Time of Sampling: 0945

Screened Interval: 0 - 20.5
Sampling Depth (*approx. the center of saturated screen*): ~13.5'
Time Start Purge: 0917
Time End Purge: 1013

Time (3-5 min intervals)	Water Level (drawdown <0.33') WL-Meter or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/m ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
0920	7.85	0.15	5.68	65.2	N/A	7.53	8.36	118
0923	7.85	0.15	5.85	64.6		3.09	9.41	48
0926	7.85	0.15	5.97	63.8		2.01	10.14	3
0929	7.85	0.15	6.05	63.6		1.46	10.50	-25
0932	7.85	0.15	6.10	63.4		1.28	10.75	-41
0935	7.85	0.15	6.13	63.1		1.18	10.92	-55
0938	7.85	0.15	6.14	63.0		1.06	10.99	-65
0941	7.85	0.15	6.16	62.8		0.99	11.09	-75

Sampling Comments: Drawdown 1098 ORP = -69 mV Temp = 14.73 °C
No turbidity, water appears clear. pH = 6.01 S.C. = 63.6 mS/m D.O. = 0.97 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW03-20101118	3 x 40ml VOA	HCl	(No) 0.45 0.10	Natural Attenuation
	2 x 500ml Poly	"	(No) 0.45 0.10	↓
	1 x 500ml Poly	H2SO4	(No) 0.45 0.10	
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1
Disposal Method: Drummed Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? NO YES ⇒ Monument Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes (No)
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Mn = >3.0 mg/L
Fe = 7.0 mg/L
Fe 2+ = 2.0 mg/L

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GROUNDWATER PURGE AND SAMPLE FORM

Client: _____ Project #: 0592-001-01
Site: HCPC Site #: HCPC
Field/Sampling Personnel: Larry Namba Well ID Number: MW07

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	2	(4)	6	Casing Volume (WC x CD)	Total Purge Volume
20.0	8.15	11.82	0.041	0.16	0.64	1.44	7.56	

Water Quality Meter: Type Quanta ID # 3
Sampling Method: Peristaltic Bladder Bailer
Other: _____
Purge/Sampling Method: Low Flow Other: _____

Date of Sampling: 18 Nov 10
Time of Sampling: 1057

Screened Interval: 5'-20 Sampling Depth (*approx. the center of saturated screen*): 15'
Time Start Purge: 1038 Time End Purge:

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1039	~~8.24~~ 8.21		6.85	0.677	40.2	13.99	10.15	-51
1042	8.21	0.192	6.81	0.703	23.9	1.28	10.62	-82
1045	8.21		6.84	0.707	21.5	0.80	10.75	-95
1048	8.22		6.58	0.707	20.4	0.68	10.78	-102
1051	8.22		6.87	0.705	21.2	0.62	10.77	-107
1054	8.22		6.88	0.708	20.2	0.55	10.81	-109

Sampling Comments:
Hach Kits – Mn = >3.0 mg/L Fe = 7.6 mg/L Fe^{2+} = 1.4 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW07-20101118	2 x 40ml VOA	HCl	(No) 0.45 0.10	Methane
	2 x 500 ml Poly	None	(No) 0.45 0.10	Nat. Attn.
	1 x 500 ml Poly	H_2SO_4	(No) 0.45 0.10	Nat. Attn.
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr):	Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:
Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) Yes (No) Monument
Surface Water Infiltration (if yes, describe)? NO (YES) ⟹ Yes (No) Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes (No)
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Drawdown @ 1122 Temp = 11.81 °C
pH = 5.75 D.O = 3.69 mg/L
Sp.C = 0.717 mS/cm ORP = -31 mV

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC Project #: 0592-001
Site: Cutrex Site #: —
Well ID Number: MW12
Field/Sampling Personnel: D Mendel

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	2	4	6	Casing Volume (WC x CD)	Total Purge Volume
15	8.67	6.33	0.041	0.16	0.64	1.44	1.01	~4L

Water Quality Meter: Type Horiba U-22 ID # 4
Sampling Method: Peristaltic Bladder Bailer
Other: —
Purge/Sampling Method: Low Flow Other: —

Date of Sampling: 11/17/10
Time of Sampling: 1350

Screened Interval: 5-15 Sampling Depth (approx. the center of saturated screen): ~11.5'
Time Start Purge: 1300 Time End Purge: 1436

Time (3-5 min intervals)	Water Level (drawdown <0.33') WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity S/M ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1309	8.70	0.12	5.83	0.107	N/A	4.01	14.08	40
1312	8.70	0.12	5.81	0.107		2.76	14.53	40
1330	8.70	0.12	5.82	0.107		2.07	15.03	38
1333	8.70	0.12	5.86	0.108		1.55	15.28	34
1336	8.70	0.12	5.90	0.107		1.35	15.42	26
1339	8.70	0.12	5.97	0.107		1.28	15.47	17
1342	8.70	0.12	6.06	0.109		0.75	15.51	1
1345	8.70	0.12	6.10	0.109		0.73	15.53	-6
1348	8.70	0.12	6.14	0.109		0.72	15.56	-13

Sampling Comments:
No turbidity/ts. Water appears
Down-well @1435 pH=6.28 Sp.C.=0.099 S/M D.O.=0.82 mg/L ORP=-18 mV Temp=16.90 °C

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW12-20101117	2 x 40ml VOA	HCl	(No) 0.45 0.10	Natural Attenuation
	2 x 500ml Poly	—	(No) 0.45 0.10	↓
DM	1 x 500ml Poly	H2SO4	(No) 0.45 0.10	
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1 Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? NO (YES) → Monument Yes / Well Casing (No)
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

DM

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Mn = 73.0 mg/L
Fe = 3.8 mg/L
Fe 2+ = 2.9 mg/L

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC Project #: 0592-001
Site: Colfax Site #: —
Field/Sampling Personnel: D Mendel

Well ID Number: MW13
Field Duplicate

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC X CD)	Total Purge Volume
19.5	8.18	11.32	0.041	0.16	0.64	1.44	1.81	~ 4L

Water Quality Meter: Type Horiba U-22 ID # 4
Sampling Method: (Peristaltic) Bladder Bailer
Other: _____
Purge/Sampling Method: (Low Flow) Other: _____

Date of Sampling: 11/17/10
Time of Sampling: 1005 / 1130

Screened Interval: 5 – 19.5 Sampling Depth (approx. the center of saturated screen): ~12.5'
Time Start Purge: 0935 Time End Purge: 1050

Time (3-5 min intervals)	Water Level (drawdown <0.33') (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/m ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
0939	8.20	0.12	5.96	69.0	N/A	3.25	13.92	168
0942	8.20	0.12	5.92	69.1		1.03	14.54	153
0945	8.20	0.12	5.95	69.4		0.86	14.80	126
0948	8.20	0.12	6.00	69.7		0.79	14.97	94
0951	8.20	0.12	6.06	70.0		0.75	14.95	63
0954	8.20	0.12	6.13	69.9		0.68	15.13	28
0957	8.20	0.12	6.17	69.8		0.66	15.32	2
1000	8.20	0.12	6.18	69.9		0.66	15.31	-3
			DI					

Sampling Comments:
No turbidimeter on for bi. Water appears clear. Dissolved O2 on pH = 6.11 D.O. = 0.92 mg/L @ 1110
SpC = 71.6 mS/m ORP = 5 mV Temp = 16.53°C

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW13-20101117	4 x 40ml VOA	HCl	(No) 0.45 0.10	G1, BTEX + MTBE
MW99-20101117	1 x 500ml AGB	—	(No) 0.45 0.10	DRPH-ORPH
	2 x 40ml VOA	HCl	(No) 0.45 0.10	
	2 x 500ml Poly	—	(No) 0.45 0.10	All for MW13-20101117 ONLY for Nat. Att. analysis
	1 x 500ml Poly	H2SO4	(No)	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~ 1	Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:
Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? NO (YES) → Monument Yes / Well Casing (No)
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Mn = 1.6 mg/L
Fe = 4.5 mg/L
Fe 2+ = 2.3 mg/L

SOUND ENVIRONMENTAL STRATEGIES
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GROUNDWATER PURGE AND SAMPLE FORM

Client: NCRC Project #: 0592-001
Site: Colfax Site #:
Well ID Number: MW25
Field/Sampling Personnel: D. Mendel

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC x CD)	Total Purge Volume
17.5	6.85	10.65	0.041	0.16	0.64	1.44	1.70	~2L

Water Quality Meter: Type Horiba U-22 ID # 4
Date of Sampling: 11/17/10
Sampling Method: Peristaltic Bladder Bailer
Other:
Purge/Sampling Method: Low Flow Other:
Time of Sampling: 1548

Screened Interval: 5 - 17.5 Sampling Depth (approx. the center of saturated screen): ~11.5'
Time Start Purge: 1529 Time End Purge: 1606

Time (3-5 min intervals)	Water Level (drawdown <0.33') WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/m ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1531	6.86	0.18	6.05	58.0	N/A	3.85	14.11	-6
1534	6.86	0.18	6.02	58.0		1.11	14.90	-5
1537	6.86	0.18	6.02	57.9		0.76	15.45	-6
1540	6.86	0.18	6.04	58.1		0.64	15.76	-7
1543	6.86	0.18	6.05	58.7		0.61	15.85	-8
1546	6.86	0.18	6.06	58.8		0.58	15.92	-9

Sampling Comments:
No turbidimeter. Water appears clearly. Downwell @ 1614 pH = 6.01 ORP = 32 mV Temp = 17.03 °C Sp.C. = 59.1 mS/m D.O. = 0.73 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW25-20101117	2 x 40ml VOA	HCl	(No) 0.45 0.10	Natural Attenuation
	2 x 500ml Poly	—	(No) 0.45 0.10	↓
	1x 500ml Poly	H2SO4	(No) 0.45 0.10	
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1/2	Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:
Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) / No Monument; (Yes) / No Well Casing
Surface Water Infiltration (if yes, describe)? NO (YES) →
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:
Broken bolt wing.

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

$Mn = >3.0$ mg/L
$Fe = 0.2$ mg/L
$Fe\ 2+ = 0$ mg/L

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

GROUNDWATER PURGE AND SAMPLE FORM

Client: _____ Project #: 0592-001-01

Site: NCPC Site #: NCPC

Field/Sampling Personnel: Larry Nambu

Well ID Number: MW26

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC x CD)	Total Purge Volume
17.59	8.49	9.10	0.041	0.16	0.64	1.44	1.46	

Water Quality Meter: Type Quanta ID # 3

Sampling Method: (Peristaltic) Bladder Bailer

Other: _____

Purge/Sampling Method: (Low Flow) Other: _____

Date of Sampling: 17 Nov 10

Time of Sampling: 1338

Screened Interval: 5.5 - 18.5 Sampling Depth (*approx. the center of saturated screen*): 12'

Time Start Purge: 1319 Time End Purge:

Time (3-5 min intervals)	Water Level (drawdown <0.33') w/ Meter or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1320	8.52		6.95	0.763	357	6.26	13.85	-73
1323	8.52	0.228	6.91	0.769	241	0.66	14.62	-99
1326	8.53		6.90	0.772	156	0.34	14.96	-112
1329	8.53		6.90	0.771	146	0.33	15.02	~114
1332	8.53		6.90	0.772	112	0.31	15.06	~111
1335	8.54		6.89	0.773	96.6	0.30	15.17	~114

Sampling Comments: Black fine grain sands in water column. Dewatered @ 1447 ORP = -101 mV Temp = 15.97 °C
Hach Kits - $Fe = 10.0$ mg/L, $Fe^{2+} = 4.0$ mg/L, $Mn = > 3.0$ mg/L pH = 6.60 Sp.C = 79.1 mS/m D.O. = 0.66 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW26-20101117	4x 40ml VOA	HCl	No 0.45 0.10	B,BIEX, MTBE
	1x 500 ml AGB	None	No 0.45 0.10	TPH-Dx
	2x 40ml VOA	HCl	No 0.45 0.10	Methane
	1x 500 ml Poly	H_2SO_4	No 0.45 0.10	K-N, Phosphorus
	2x 500 ml poly	None		Alk, sulfate, sulfide, Nitrate Nitrite

(DM 11/17/10)

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) NO (YES) ⟹ Monument (Yes) Well Casing (No)

Surface Water Infiltration (if yes, describe)? Yes / No

Action Items (e.g.: repair of any monitoring well components)?

Additional Well Condition Comments or Explanation of any Access Issues:

Needs new bolts

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

GROUNDWATER PURGE AND SAMPLE FORM

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

Client: NCPC Project #: 0592-001
Site: Colfax Site #: —
Field/Sampling Personnel: D. Merkel Well ID Number: CMW05

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC x CD)	Total Purge Volume
—	8.71	—	0.041	0.16	0.64	1.44	—	~4L

Water Quality Meter: Type Horiba U-22 ID # 4 Date of Sampling: 11/17/10
Sampling Method: (Peristaltic) Bladder Bailer
Other:
Purge/Sampling Method: (Low Flow) Other: Time of Sampling: 1738

Screened Interval: — Sampling Depth (approx. the center of saturated screen): ~11.5'
Time Start Purge: 1709 Time End Purge: 1759

Time (3-5 min intervals)	Water Level (drawdown <0.33') (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/M ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
1712	8.73	0.16	6.90	94.3	N/A	3.70	12.75	-15
1715	8.73	0.16	6.55	95.7		2.79	12.86	-48
1718	8.73	0.16	6.60	95.3		1.67	13.15	-69
1721	8.73	0.16	6.59	94.9		1.30	13.03	-77
1724	8.73	0.16	6.58	94.0		1.38	13.47	-85
1727	8.73	0.16	6.57	93.6		1.22	13.69	-90
1730	8.73	0.16	6.55	93.1		1.06	13.92	-94
1733	8.73	0.16	6.55	92.9		0.94	14.03	-97
1736	8.73	0.16	6.54	92.7		0.93	14.08	-100
—	—	DM						

Sampling Comments: Downhill @ 1510
No turbidimeter. Water appears clear. pH = 6.55 Sp.C. = 93.6 ORP = -86 mV Temp = 15.32 °C D.O. = 0.68 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
CMW05-20101117	2 x 40ml VOA	HCl	(No) 0.45 0.10	Natural Attenuation
	2 x 500ml Poly	—	(No) 0.45 0.10	↓
DM	1 x 500ml Poly	H2SO4	(No) 0.45 0.10	↓
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1 Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) Monument / No Well Casing
Surface Water Infiltration (if yes, describe)? (NO) YES ⇒ Yes / (NO)
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Mn = 2.4 mg/L
Fe = 6.5 mg/L
Fe2+ = 4.6 mg/L

Groundwater Purge and Sample Forms for First Quarter 2011

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCPC
Site: Cotfue
Field/Sampling Personnel: D. Mandel

Project #: 0597-021
Site #:

Well ID Number: MW02

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (Inches) 1	2	(4)	6	Casing Volume (WC x CD)	Total Purge Volume
—	5.98	—	0.041	0.16	0.64	1.44	—	~5L

Water Quality Meter: Type Horiba U-22 ID # U #3
Sampling Method: Peristaltic Bladder Bailer
Other:
Purge/Sampling Method: Low Flow Other:

Date of Sampling: 2/16/11
Time of Sampling: 17-39

Screened Interval: — Sampling Depth (*approx. the center of saturated screen*): ~ 9'
Time Start Purge: 1718 Time End Purge: 1805

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1721	5.98	0.15	5.67	0.95	70.6	11.69	8.76	166
1724	5.98	0.15	5.96	0.97	61.1	9.53	9.61	146
1727	5.98	0.15	6.03	0.97	67.3	8.61	9.55	135
1730	5.98	0.15	6.08	0.98	57.6	8.05	9.55	124
1733	5.98	0.15	6.14	0.98	32.8	7.71	9.48	113
1736	5.98	0.15	6.18	0.98	30.0	7.50	9.47	105

Sampling Comments:

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW02-20110216	2 x 40ml VOA	HCl	(NO) 0.45 0.10	Nat Atten
	1 x 500ml Poly	H2SO4	(No) 0.45 0.10	V
	1 x (250)ml Poly	Yes	(No) 0.45 0.10	Sulfide
	3 x 500ml Poly	—	(No) 0.45 0.10	Nat Atten + Nitrates + Nitrites

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1.1/4 Disposal Method: Drummed Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? (NO) YES ⟹ Monument: Yes; Well Casing: (No)
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down-well measurements (@ 1810)
pH = 6.66
T °C = 0.611 mS/cm
ORP = 67 mV
D.O. = 1.05 mg/L @ 0.2%

FC = 0.7 mg/L FC'd = 0.5 mg/L

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM

Client: NCPC
Site: Colfax
Field/Sampling Personnel: D. Mordel

Project #: 0590-CC1
Site #:

Well ID Number: MW03

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2	(4)	6	Casing Volume (WC X CD)	Total Purge Volume
—	7.26	—	0.041	0.16	0.64	1.44	—	~5L

Water Quality Meter: Type Horiba U-22 ID # KF3
Sampling Method: (Peristaltic) Bladder Bailer
Other:
Purge/Sampling Method: (Low Flow) Other:

Date of Sampling: 8/17/11
Time of Sampling: 0914

Screened Interval:
Sampling Depth (*approx. the center of saturated screen*): ~10'
Time Start Purge: 0851
Time End Purge: 0935

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or If <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
0853	7.28	0.15	6.83	0.94	41.4	12.31	7.93	120
0856	7.28	0.15	6.47	0.94	35.4	10.74	8.34	90
0859	7.28	0.15	6.55	0.94	25.5	9.29	8.61	66
0902	7.28	0.15	6.61	0.94	25.8	8.51	8.69	44
0905	7.28	0.15	6.66	0.94	17.4	8.03	8.57	25
0908	7.28	0.15	6.69	0.94	10.9	7.70	8.57	12
0914	7.28	0.15	6.72	0.94	11.4	7.49	8.51	0

Sampling Comments:

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW03-20110817	2x40ml VOA	HCl	(No) 0.45 0.10	Nat Attn
	1x 500ml Poly	H2SO4	(No) 0.45 0.10	V
	1x (250?)ml Poly	Yes	(No) 0.45 0.10	Sulfide
	3x 500ml Poly	—	(No) 0.45 0.10	Nat Attn + Nitrate + Nitrite

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1 1/4
Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? (NO) YES ⟹ Monument: Yes; Well Casing: (No)
Action Items (e.g.: repair of any monitoring well components)?
Additional Well Condition Comments or Explanation of any Access Issues:

21

Down-well measurements (@ 0910)
pH = 6.81
EC = 0.613 mS/cm
ORP = −36 mV
D.O. = 0.39 mg/L @ 9.8°C

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Fe = ≥10 mg/L Fe2+ = 3.3 mg/L

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCR
Site: Colfax
Field/Sampling Personnel: D. Mandl

Project #: 0592-001
Site #:

Well ID Number: MW07 (Nat. Atten.) p1 of 2

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2	(4)	6	Casing Volume (WC X CD)	Total Purge Volume
—	7.10	—	0.041	0.16	0.64	1.44	—	~ 12L

Water Quality Meter: Type Horiba U-22 ID # K#3
Sampling Method: (Peristaltic) Bladder Bailer
Other:
Purge/Sampling Method: (Low Flow) Other:

Date of Sampling: 2/15/11
Time of Sampling: 1755

Screened Interval:
Sampling Depth (*approx. the center of saturated screen*): ~10'
Time Start Purge: 1705
Time End Purge: 1807

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or If <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1708	7.18	0.1	6.21	1.02	8.0	11.70	8.68	119
1711	7.18	0.1	6.54	1.02	3.2	9.45	9.64	57
1714	7.20	0.2	6.73	1.02	1.6	8.07	10.69	56
1717	7.20	0.2	6.89	1.02	0.1	7.36	11.29	27
1720	7.20	0.2	7.03	1.02	-0.5	7.00	11.48	-2
1723	7.20	0.2	7.14	1.03	-0.8	6.85	11.58	-24
1726	7.20	0.2	7.27	1.03	-0.9	6.77	11.58	-41
1729	7.20	0.2	7.34	1.03	-0.9	6.71	11.60	-54
1732	7.20	0.2	7.[illegible]49	1.03	-1.0	6.74	11.50	-63
1742	7.20	0.2	7.60	1.04	1.6	7.38	10.56	-84
1745	7.20	0.2	7.60	1.02	-0.3	6.91	11.24	-89
1748	7.20	0.2	7.62	1.03	0.1	6.80	11.51	-93

Sampling Comments: Purge stopped @ 1733 to replace Horiba battery, restarted @ 1741
Fe = ≥ 10 mg/L Fe 2+ = 2 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW07-20110215	2 x 40 ml VOA	HCl	(No) 0.45 0.10	Nat Atten
(DUP)	1 x 500 ml Poly	H2SO4	(No) 0.45 0.10	N
	1 x (250) ml Poly	Yes	(No) 0.45 0.10	Sulfide
	3 x 500 ml Poly	—	(No) 0.45 0.10	Nat Atten + Nitrates + Nitrite

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~3
Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? NO (YES) → Monument Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes (No)
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down well measurements (@1815)
pH = 7.42
EC = 0.528 mS/cm
ORP = -61
DO = 0.68 mg/L @ 10.8°C

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM (Continued)

p 2 of 2

Client: NCPC
Site: Calsx

Project #: 0592-001
Site #: ---

Well ID Number: MW07

Field/Sampling Personnel: DMendel

Water Quality Meter: Type: Horiba U-22 ID: K #3

Sampling Equipment: (Peristaltic) Bladder Bailer Other: _____

Purge/Sampling Method: (Low Flow) Other: _____

Sample Date: 2/15/11

Sample Time: 1755

Sample Number: MW07-20110215

Screened Interval: _____ Sampling Depth (Approx. center of saturated *screen*): ~10'

Time Start Purge: 1705 Time End Purge: 1807

Time (in 3-5 min intervals)	Depth to Water (*drawdown <0.33'*) (WL Meter) Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity ~~uS/cm~~ ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1751	7.20	0.2	7.62	1.03	1.6	6.72	11.57	-96

DM 2/15/11

Sampling Comments:

DM

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCPC
Site: Colfax
Field/Sampling Personnel: D. Merkel

Project #: 0590-001
Site #: —

Well ID Number: MW12 (Not Alten)

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2	4	6	Casing Volume (WC X CD)	Total Purge Volume
—	7.01	—	0.041	0.16	0.64	1.44	—	~4L

Water Quality Meter: Type: Horiba U-22 ID # K#3
Sampling Method: Peristaltic Bladder Bailer
Other: —
Purge/Sampling Method: Low Flow Other: —

Date of Sampling: 9/16/11
Time of Sampling: 0956

Screened Interval: —
Sampling Depth (*approx. the center of saturated screen*): ~10'
Time Start Purge: 0936
Time End Purge: 1015

Time (3-5 min Intervals)	Water Level (drawdown <0.33') (WL Meter or Bubbler)	Rate of Purging (Liter/min) 0.1 - 0.5	pH ±0.1	Specific Conductivity 4.5KM ±3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ±10% or if <1.00 mg/L ±0.2	Temperature (°C) ±3%	ORP (mV)
0938	7.01	0.15	6.37	1.19	46.4	11.05	9.65	167
0941	7.01	0.15	6.38	1.20	40.4	9.83	10.18	166
0944	7.01	0.15	6.37	1.20	34.5	8.48	10.90	164
0947	7.01	0.15	6.37	1.19	30.4	7.83	11.08	160
0950	7.01	0.15	6.39	1.20	24.5	7.50	11.19	157
0953	7.02	0.15	6.41	1.19	22.2	7.37	11.15	154

Sampling Comments:
Fe = 1.5 mg/L Fe2+ = 1.3 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW12-20110916	2 x 40 ml VOA	HCl	(No) 0.45 0.10	Nat Atten
	1 x 500 ml Poly	H2SO4	(No) 0.45 0.10	"
	1 x (250) ml Poly	Yes	(No) 0.45 0.10	Sulfide
	3 x 500 ml Poly	—	(No) 0.45 0.10	Nat Atten + Nitrate+Nitrite

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1
Disposal Method: Drummed Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) / No
Surface Water Infiltration (if yes, describe)? NO (YES) ⇒ Monument / Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes / (No)
Additional Well Condition Comments or Explanation of any Access Issues:

—

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down-well measurements (probe)
pH = 6.52
SpC = 0.863
ORP = 143
DO = 1.29 mg/L @ 21.1 °C

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCPC
Site: Calfax
Project #: 0592-001
Site #:
Field/Sampling Personnel: D Merkel

Well ID Number: MW13
Field Duplicate + Natt. Atten.

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (Inches) 1	2	4	6	Casing Volume (WC x CD)	Total Purge Volume
—	7.24	—	0.041	0.16	0.64	1.44	—	~4L

Water Quality Meter: Type: Horiba U22 ID #: K #3
Sampling Method: (Peristaltic) Bladder Baller
Other:
Purge/Sampling Method: (Low Flow) Other:

Date of Sampling: 9/16/11
Time of Sampling: 1553/1700

Screened Interval:
Sampling Depth (*approx. the center of saturated screen*): ~10.5
Time Start Purge: 1514
Time End Purge: 1655

Time (3-5 min intervals)	Water Level (drawdown <0.33') (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	pH ±0.1	Specific Conductivity mS/cm ±3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ±10% or If <1.00 mg/L ±0.2	Temperature (°C) ±3%	ORP (mV)
1517	7.24	0.15	6.16	0.490	272.0	11.19	11.03	87
1521	7.24	0.15	6.34	0.478	120.0	10.07	11.39	73
1524	7.24	0.15	6.36	0.479	93.5	9.01	11.33	65
1527	7.24	0.15	6.40	0.485	75.1	8.09	11.10	55
1530	7.24	0.15	6.43	0.488	71.4	7.81	10.88	49
1533	7.24	0.1	6.51	0.510	62.0	8.02	9.21	37
1539	7.24	0.1	6.53	0.486	40.5	7.41	10.26	32
1542	7.24	0.1	6.54	0.489	38.2	7.22	10.50	27
1545	7.24	0.1	6.56	0.491	37.4	7.10	10.69	24
1548	7.24	0.1	6.57	0.497	30.1	7.04	10.58	20
						Low		

Sampling Comments: Cleared flow-thru cell @ 1518 clear & orange particulate building up in line 1519. Pump disd @ 1730 Pump restarted @ 1535.

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request	
MW13-20110916	4 x 40ml VOA	HCl	(No) 0.45 0.10	Gx, BTEX + MTBE	FD (MW99)
MW99-20110916	1 x 500ml AGB	—	(No) 0.45 0.10	ORDM, ORPH	
	2 x 40ml VOA	HCl	(No) 0.45 0.10	N.A. Atten.	
	4 x 500ml Poly	1-H2SO4/3-NaOH	(No) 0.45 0.10	Nat. Atten + Nitrates + Nitrites	
	1 x (250?)ml Poly	Yes	(No)	Sulfide	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1
Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) (Yes) No
Surface Water Infiltration (if yes, describe)? NO (YES) ⟹ (Monument) Well Casing
Action Items (e.g.: repair of any monitoring well components)? Yes (No)
Additional Well Condition Comments or Explanation of any Access Issues:

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down-well measurements (@ 1655)
pH = ~~6.55~~ 6.48
SPC = 0.486 mS/cm
ORP = 96 mV
D.O = 0.82 @ 10.6°C

Fe = 1.8 mg/L Fe 2+ = 1.6 mg/L

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCPC Project #: 0592-001

Site: Gulfwx Site #: ——

Field/Sampling Personnel: D. Merkel

Well ID Number: MW25 (Nat. Atten.)

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (Inches) 1	(2)	4	6	Casing Volume (WC x CD)	Total Purge Volume
17.5	6.16	——	0.041	0.16	0.64	1.44	——	~6L

Water Quality Meter: Type Horiba U-20 ID # K #3 + Down-well DO Heath meter for down-well measurements Date of Sampling: 2/15/11

Sampling Method: (Peristaltic) Bladder Bailer

Other: ——

Purge/Sampling Method: (Low Flow) Other: —— Time of Sampling: 1547

Screened Interval: 5-17.5 Sampling Depth (approx. the center of saturated screen): ~9'

Time Start Purge: 1505 Time End Purge: 1605

Time (3-5 min intervals)	Water Level (drawdown <0.33') (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1507	6.18	0.15	6.92	0.587	20.9	10.39	11.47	58
1510	6.19	0.15	6.83	0.595	5.3	9.20	11.98	53
1513	6.19	0.15	6.83	0.595	15.1	8.47	12.28	46
1516	6.19	0.15	6.84	0.596	7.1	7.87	12.43	40
1519	6.19	0.15	6.86	0.597	3.0	7.34	12.49	33
1522	6.18	~~0.15~~ 0.18	6.88	0.599	2.6	7.41	11.56	28
1525	6.17	0.15	6.97	0.599	10.4	7.31	10.20	20
1528	6.18	0.15	6.95	0.598	4.9	6.86	11.30	18
1540	6.18	0.15	6.95	0.598	1.9	6.78	11.34	17
1543	6.18	0.15	6.95	0.598	1.4	6.81	11.34	15

Sampling Comments: Pump shut @ 1503, moved south for power & restarted 1533.
Fe = 1.8 mg/L Fe 2+ = 1.5 mg/L

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW25-20110215	2 x 40 ml VOA	HCl	(No) 0.45 0.10	Nat. Atten
	1 x 500 ml Poly	H2SO4	(No) 0.45 0.10	↓
	3 x 500ml Poly	——	(No) 0.45 0.10	+ Nitrates + Nitrites
			No 0.45 0.10	

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1.5 Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock)

Surface Water Infiltration (if yes, describe)? NO (YES) ⇒

Action Items (e.g.: repair of any monitoring well components)?

Additional Well Condition Comments or Explanation of any Access Issues:

Yes (Monument) Yes (No) Well Casing (No)

1 broken bolt missing

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down-well measurements (@ 1615)

pH = 6.86

SpC = 0.591 mS/cm

ORP = 55 mV

DO = 0.57 mg/L @ 12.1°C

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCPC Project #: 0592-001

Site: Colfax Site #: — Well ID Number: MW26

Field/Sampling Personnel: D Mendel

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD – DTW)	Casing Diameter (inches) 1	(2)	4	6	Casing Volume (WC X CD)	Total Purge Volume
16.5	7.21	—	0.041	0.16	0.64	1.44	—	~8L

Water Quality Meter: Type Horiba U-22 ID # K#3 **Date of Sampling:** 2/16/11

Sampling Method: (Peristaltic) Bladder Bailer

Other: —

Purge/Sampling Method: (Low Flow) Other: — **Time of Sampling:** 1145

Screened Interval: 5.5 – 15.5 Sampling Depth (*approx. the center of saturated screen*): ~10'

Time Start Purge: 1100 Time End Purge: 1210

Time (3-5 min intervals)	Water Level (*drawdown <0.33'*) (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ±0.1	Specific Conductivity mS/cm ±3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ±10% or if <1.00 mg/L, ±0.2	Temperature (°C) ±3%	ORP (mV)
1124	7.21	0.15	6.30	1.06	210.0	11.22	10.69	122
1129	7.22	0.15	6.59	1.07	150.0	8.51	10.94	59
1132	7.22	0.15	6.67	1.07	120.0	7.89	10.98	29
1135	7.22	0.15	6.85	1.07	107.0	7.49	10.99	2
1138	7.21	0.15	6.84	1.08	81.4	7.26	10.93	-26
1142	7.21	0.15	6.85	1.08	69.7	7.12	10.88	-40

Sampling Comments: Water is initially silty & stinky @ time of DTW ~~read~~ opening of well, water was in monument w/water level exactly @ bot of casing & ~~;~~ plug was in ~~easily~~ but looked askew (not fully sealed?) - potential for surface infiltration?

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
MW26-20110216	2x40ml VOA	HCl	(No) 0.45 0.10	Nat Atten.
Sam	1x500ml Poly	H2SO4	(No) 0.45 0.10	↓
	1x(250ml?) Poly	Yes	(No) 0.45 0.10	Sulfide
	3x500ml Poly	—	(No) 0.45 0.10	Nat Atten + Nitrates + Nitrites

Figure for legal to slightly gray turbid prior to parameters

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~2	Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) Yes (No) Monument → Well Casing

Surface Water Infiltration (if yes, describe)? NO (YES) ⟹ Yes (No) Monument

Action Items (e.g.: repair of any monitoring well components)?

Additional Well Condition Comments or Explanation of any Access Issues:

3 sec sampling locks, 4 dumping bolts

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down well measurements (@ 1215)

pH = 7.12

SpC = 0.751 mS/cm

ORP = -33 mV

DO = 0.25 @ 11.2°C

Fe = 4.1 mg/L Fe2+ = 2.4 mg/L

GROUNDWATER PURGE AND SAMPLE FORM

SoundEarth Strategies

Client: NCPC
Site: Colfax
Field/Sampling Personnel: D. Madel

Project #: 0592-001
Site #: ——

Well ID Number: CMW05

Total Depth	Depth to Water (Prior To Purging)	Water Column (TD - DTW)	Casing Diameter (inches) 1	2	4	6	Casing Volume (WC X CD)	Total Purge Volume
—	6.99	—	0.041	(0.16)	0.64	1.44	—	~4L

Water Quality Meter: Type Horiba U-22 ID # R #3
Date of Sampling: 8/17/11
Sampling Method: (Peristaltic) Bladder Bailer
Other:
Purge/Sampling Method: (Low Flow) Other:
Time of Sampling: 1056

Screened Interval: ——
Sampling Depth (approx. the center of saturated screen): ~10'
Time Start Purge: 1034
Time End Purge: 1123

Time (3-5 min intervals)	Water Level (drawdown <0.33') (WL Meter) or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5	pH ± 0.1	Specific Conductivity mS/cm ± 3% (UNITS)	Turbidity (NTU)	Dissolved Oxygen (mg/L) ± 10% or if <1.00 mg/L, ± 0.2	Temperature (°C) ± 3%	ORP (mV)
1038	6.99	0.15	6.50	1.18	17.6	12.12	9.24	14
1041	6.99	0.15	6.78	1.18	10.5	10.07	9.84	-11
1044	6.99	0.15	6.87	1.18	6.7	3.72	10.44	-28
1047	6.99	0.15	6.94	1.19	5.2	8.00	10.50	-39
1050	6.99	0.15	6.98	1.19	3.7	7.93	10.59	-47
1053	6.99	0.15	7.02	1.19	3.0	7.78	10.71	-54

DM

Sampling Comments:

Sample Number/ID	Container Type	Preservative	Field Filtered?	Analysis Request
CMW05-20110817	2 x 40ml VOA	HCl	(No) 0.45 0.10	Nat Atten
↓	1 x 500ml Poly	H2SO4	(No) 0.45 0.10	↓
	1 x 250ml Poly	Yes	(No) 0.45 0.10	Sulfide
	5 x 500ml Poly	—	(No) 0.45 0.10	NA Atten+Nitrates+Nitrites

PURGE WATER DISPOSAL NOTES:

Total Discharge (1Gal=3.8785Ltr): ~1 | Disposal Method: (Drummed) Remed. System Other:

Well/Site Condition Information:

Well/Security Devices in good condition? (i.e.: Monument, Bolts, Seals, J-cap, Lock) — (Yes) Monument; No Well Casing
Surface Water Infiltration (if yes, describe)? (NO) YES ⟹
Action Items (e.g.: repair of any monitoring well components)? — Yes Monument; (No) Well Casing
Additional Well Condition Comments or Explanation of any Access Issues:
Jc plug has lock and does not fit well (head replaced, used new for MW303), capped w/ Fernco fitting

- *Three successive readings should be within the indicated parameter limits prior to sampling*
- *All units of measurement are in feet and/or gallons unless otherwise indicated*
- *If static water level is above the screen, avoid drawdown of water level into the screen*

Down-well measurements (@ 1130)
pH = 6.93
SpC = 0.687 mS/cm
ORP = -18 mV
D.O = 0.57 mg/L @ 12.0°C

Fe = 5.0 mg/L Fe2+ = 2.7 mg/L

Groundwater Purge and Sample Forms for Second Quarter 2011

Sound Earth

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCRC Project #: 0592

Site Name/ #: Calfax Field/Sampling Personnel: D. Mandel **Well ID Number:** MW02

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter					Casing Volume =WC x VC
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
20.5 Feet BTOC	5.91 Feet BTOC	14.59 Feet BTOC	0.023	0.041	0.17	0.65	1.44	9.48 gallons

Screened Interval: 6 to 20.5 Feet bgs Screen Submerged? ☐ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☒ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: _ Owner/ID #: Kleinfelder **Water Quality Meter** Brand/Model: YSI + ORP ISE Owner/ID #: Kleinfelder

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: _ Owner/ID #: SES

Sampling

Depth of Tubing Intake: ~13 Feet BTOC Time Start Purge: 1127

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% if <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% if ≤1.00, ± 0.2	Temperature (°C)	ORP (mV)
1129	5.93	0.2	6.63	0.530	59.3	16.99	12.97	90.6
1132	5.93	0.2	6.48	0.537	55.4	11.04	12.65	83.3
1135	5.93	0.2	6.60	0.542	36.5	24.55	13.99	81.2
1138	5.93	0.2	6.43	0.537	22.2	12.27	12.49	84.9
1141	5.93	0.2	6.42	0.524	13.1	13.80	12.30	89.0
1144	5.93	0.2	6.40	0.500	10.8	18.76	12.50	96.2
				Minimum # of Readings				
1147	5.93	0.2	6.40	0.517	09.4	19.81	12.36	97.9
1150	5.93	0.2	6.40	0.515	09.3	20.80	12.64	100.7
1153	5.93	0.2	6.39	0.514	08.6	22.01	12.69	104.7

Sample Date: 5/19/11 **Sample Time:** 1157 **Field Duplicate Sample Time:** _ **Time Sampling Ended:** 1207

Sampling Comments: Flow thru cell emptied @ 1134 due to preferable circumstances; stabilized w/o DO stabilization - obvious poor #, will get from 2 Down-well Hydrolab measured: Temp = 10.86 °C SpC = 0.5338 mS/cm DO = 1.73 mg/L ORP = 108 mV

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW02-DOLICS19	2 x 40ml VOA	HCl	(No)	0.45	0.10	MNA
	1 x 500ml Poly	H2SO4	(No)	0.45	0.10	
	2 x 500ml Poly	—	(No)	0.45	0.10	
	1 x 250(?)ml Poly	ZnAc	(No)	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

Purge Water

Sheen? ☐ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: _ Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~1.5 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: _

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: _

Water in Monument? ☒ NO ☐ YES ⟹ Describe: _

Additional Well Condition Comments or Explanation of any Access Issues: _

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Sound

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCRC Project #: 0592

Site Name/ #: Cliffs Field/Sampling Personnel: P. Mendel **Well ID Number:** MW03

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter					Casing Volume =WC x VC
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
20.5 Feet BTOC	6.17 Feet BTOC	14.33 Feet BTOC	0.023	0.041	0.17	0.65	1.44	9.31 gallons

Screened Interval: 6 to 20.5 Feet bgs Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: Owner/ID #: Krause **Water Quality Meter** Brand/Model: Hydrolab DS5/5C Owner/ID #: Krause

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: Owner/ID #: SC5

Sampling

Depth of Tubing Intake: ~9 Feet BTOC Time Start Purge: 1309

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% If <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1312	6.18	0.15		0.8531	39.2	3.29	16.19	-18
1315	6.18	0.15		0.8463	31.2	0.72	15.42	-38
1318	6.18	0.15		0.8521	23.8	0.55	15.39	-50
1321	6.18	0.15		0.8517	23.4	0.50	15.31	-58
1324	6.18	0.15		0.8496	18.3	0.48	14.91	-64
1327	6.18	0.15		0.8474	17.7	0.45	15.07	-70
				Minimum # of Readings				
1330	6.18	0.15		0.8481	16.7	0.44	15.18	-72

Sample Date: 5/18/11 **Sample Time:** 1333 **Field Duplicate Sample Time:** **Time Sampling Ended:** 1352

Sampling Comments: Pump well measured: Temp= 10.98 °C Spc =0.8898 mS/cm DO= 0.50 mg/L ORP= -60 mV pH measured w/ Quanta = 6.80

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW03-20110518	2x 40ml vial	HCl	(No)	0.45	0.10	MNA
	1x 500ml poly	HNO3	(No)	0.45	0.10	
	2x 500ml poly	—	(No)	0.45	0.10	
	1x 250(?)ml poly	ZnAc	(No)	0.45	0.10	
	+1 cyclone		(No)	0.45	0.10	Field-measured pH
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~1.25 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other:

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe:

Water in Monument? ☒ NO ☐ YES ⟹ Describe:

Additional Well Condition Comments or Explanation of any Access Issues:

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Sound

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCPC | Project #: 0592

Site Name/ #: Colfax | Field/Sampling Personnel: D Mandel | **Well ID Number:** MW07

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter					Casing Volume =WC x VC
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
20 Feet BTOC	6.96 Feet BTOC	13.04 Feet BTOC	0.023	0.041	0.17	0.65	1.44	8.48 gallons

Screened Interval: 5 to 20 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: _____ Owner/ID #: Kansas

Water Quality Meter Brand/Model: Hydrolab + YSI 556 Owner/ID #: Kansas

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: _____ Owner/ID #: SES

Sampling

Depth of Tubing Intake: ~10 Feet BTOC | Time Start Purge: 1411

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% If <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% If ≤1.00, ± 0.2	Temperature (°C)	ORP (mV)
1413	7.00	0.2		0.8173	06.2	0.87	18.63	-110
1416	7.01	0.2		0.8499	04.6	0.49	16.11	-125
1419	7.01	0.2		0.8573	03.6	0.41	15.92	-129
1422	7.01	0.2		0.8505	04.3	0.37	15.61	-130
1425	7.02	0.2		0.8535	01.1	0.38	15.88	-131
1428	7.02	0.2		0.8525	06.9	0.33	15.63	-131
				Minimum # of Readings				

Sample Date: 5/18/11 **Sample Time:** 1430 **Field Duplicate Sample Time:** _____ **Time Sampling Ended:** 1445

Sampling Comments: Down-well measured. Temp = 11.14 °C SpC = 0.8504 mS/cm DO = 0.52 mg/L ORP = -121 mV
Cross measured pH = 7.04

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW07 - 20110518	2 x 40 ml VOA	HCl	(No)	0.45	0.10	MNA
	1 x 500 ml Poly	H2SO4	(No)	0.45	0.10	
	2 x 500 ml Poly	—	(No)	0.45	0.10	
	1 x 250(?) ml Poly	ZnAc	(No)	0.45	0.10	
	+1 ziploc bag	—	(No)	0.45	0.10	Field - measured pH
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: _____ Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~1.25 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: _____

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: _____

Water in Monument? ☐ NO ☒ YES ⟹ Describe: below TOC

Additional Well Condition Comments or Explanation of any Access Issues: _____

[1] At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Soundpoint

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCPC | Project #: 0592
Site Name/#: Colfax | Field/Sampling Personnel: D. Medel | **Well ID Number:** MW12

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter / Volume Conversion Factor (VC)					Casing Volume =WC x VC
			0.75"	1"	2"	4"	6"	
15 Feet BTOC	6.90 Feet BTOC	8.1 Feet BTOC	0.023	0.041	0.17	0.65	1.44	1.38 gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: Owner/ID #: Krause

Water Quality Meter Brand/Model: Hydrolab DS5R Owner/ID #: Krause

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: Owner/ID #: SES

Sampling

Depth of Tubing Intake: ~10 Feet BTOC | Time Start Purge: 1126

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% if <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% if ≤1.00, ± 0.2	Temperature (ºC)	ORP (mV)
1129	6.90	0.15		0.954	09.2	1.41	23.41	75
1132	6.90	0.15		1.025	13.1	0.89	16.70	83
1135	6.90	0.15		1.040	17.4	0.61	16.48	86
1138	6.901	0.15		1.035	14.4	0.53	16.12	88
1141	6.91	0.15		1.036	14.9	0.47	16.06	89
1144	6.91	0.15		1.034	19.4	0.50	16.13	87
				Minimum # of Readings				
1147	6.91	0.15		1.043	25.7	0.49	15.96	80
1150	6.91	0.15		1.049	27.3	0.46	16.37	60
1153	6.91	0.15		1.039	29.0	0.44	16.36	36
1156	6.91	0.15		1.046	21.6	0.43	15.78	29
1159	6.91	0.15		1.048	19.1	0.52	15.95	19
1202	6.91	0.15		1.047	18.0	0.44	15.85	15
1205	6.91	0.15		1.049	17.6	0.42	16.25	16

Sample Date: 5/18/17 **Sample Time:** 1208 **Field Duplicate Sample Time:** **Time Sampling Ended:** 1219

Sampling Comments: Down-well measured: Temp = 17.61 °C SpC = 1.026 mS/cm DO = 0.81 mg/L ORP = -12 mV emptied turbidity flow-thru @ 1148 pH measured at end = 7.00

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW12-20170518	2x 40ml VOA	HCl	No	0.45	0.10	4NA
	1x 500ml Poly	H2SO4	No	0.45	0.10	
	2x 500ml poly	—	No	0.45	0.10	
	1x 250ml Poly	ZnAc	No	0.45	0.10	
	+ 1 ziploc bag	—	No	0.45	0.10	Field measured pH
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~1.5 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other:

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☒ NO ⟹ Describe: Bolts/locks stripped

Water in Monument? ☐ NO ☒ YES ⟹ Describe: Below TOC

Additional Well Condition Comments or Explanation of any Access Issues:

[1] At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Sound

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCPC | Project #: 0592

Site Name/ #: Colfax | Field/Sampling Personnel: D Mandel | **Well ID Number:** MW13

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter					Casing Volume =WC x VC
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
19.5 Feet BTOC	7.26 Feet BTOC	12.24 Feet BTOC	0.023	0.041	0.17	0.65	1.44	2.08 gallons

Screened Interval: 5 to 19.5 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: Owner/ID #: Kruse

Water Quality Meter Brand/Model: Hydrolab + YSI 556 Owner/ID #: Kruse

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: Owner/ID #: SCS

Sampling

Depth of Tubing Intake: ~10 Feet BTOC | Time Start Purge: 0933

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% if <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% if ≤1.00, ± 0.2	Temperature (ºC)	ORP (mV)
0938	7.26	0.15		0.5561	138.8	1.21	16.65	102
0941	7.26	0.15		0.5698	116.1	0.62	15.59	59
0944	7.26	0.15		0.5859	79.1	0.56	14.86	50
0947	7.26	0.15		0.5876	72.3	0.60	14.85	47
0950	7.26	0.15		0.5883	48.4	0.56	14.17	46
0953	7.26	0.15		0.5906	46.5	0.56	14.06	48
				Minimum # of Readings				
0956	7.26	0.15		0.5917	41.8	0.53	14.42	41
0959	7.26	0.15		0.5924	39.0	0.46	14.40	41
1002	7.26	0.15		0.5952	33.7	0.49	14.35	40
1005	7.26	0.15		0.5958	32.5	0.53	14.53	40
1008	7.26	0.15		0.5975	30.8	0.51	14.62	38
					hm			

Sample Date: 5/18/11 | **Sample Time:** 1010 | MW4 Time: 1030 | **Field Duplicate Sample Time:** 1130 | **Time Sampling Ended:** 1040

Sampling Comments: Replaced J-plug pH Measured w/ Quanta = 6.84

Down-well measurements: Temp = 12.28 °C SpC = 0.5973 mS/cm DO = 0.84 mg/L ORP = 36 mV

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW13-20110518	3 x 40ml VOA	HCl	(No)	0.45	0.10	GX, BTEX + MTBE (x2 for FD)
MW14-20110518	1 x 500ml AG-B	—	(No)	0.45	0.10	DRPH + ORPH
MW13-20110518	2 x 40ml VOA	HCl	(No)	0.45	0.10	MNA
	1 x 500ml Poly	H2SO4	(No)	0.45	0.10	
	2 x 500ml Poly	—	(No)	0.45	0.10	
	1 x 250(?)ml Poly	ZnAc	(No)	0.45	0.10	

+ Ziploc of H2O

Purge Water → Field measured pH

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: Color (describe): Orangish cloudy

Total Discharged (1Gal = 3.88 liter): ~1.5 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other:

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe:

Water in Monument? ☐ NO ☒ YES ⟹ Describe: Below TOC

Additional Well Condition Comments or Explanation of any Access Issues:

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Sound

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCPC Project #: 0592

Site Name/ #: Colfax Field/Sampling Personnel: D. Mendel **Well ID Number:** MW05

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter Volume Conversion Factor (VC)					Casing Volume =WC x VC
			0.75"	1"	2"	4"	6"	
17.5 Feet BTOC	6.05 Feet BTOC	11.45 Feet BTOC	0.023	0.041	0.17	0.65	1.44	1.95 gallons

Screened Interval: 5 to 17.5 Feet bgs Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: Owner/ID #: Kranse **Water Quality Meter** Brand/Model: YSI + DR115C Owner/ID #: Kranse

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: Owner/ID #: SCS

Sampling

Depth of Tubing Intake: ~9 Feet BTOC Time Start Purge: 0937

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% If <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% If ≤1.00, ± 0.2	Temperature (ºC)	ORP (mV)
0953	6.06	0.2	6.63	0.707	03.1	1.03	13.60	-9.4
0956	6.06	0.2	6.63	0.704	03.9	1.07	13.46	-6.1
0959	6.06	0.2	7.09	0.706	03.3	13.49	13.49	-5.2
1002	6.07	0.2	6.63	0.705	02.7	2.50	13.60	-5.8
1005	6.07	0.2	6.63	0.703	02.4	1.18	13.59	-9.0
1008	6.07	0.2	6.63	0.703	03.2	1.08	13.65	-10.5
Minimum # of Readings								
1011	6.07	0.2	6.63	0.703	02.3	1.05	13.63	-10.7
1014	6.07	0.2	6.63	0.703	02.1	1.04	13.68	-11.6
1017	6.07	0.2	6.63	0.703	02.2	1.07	13.96	-12.7

Sample Date: 5/19/11 **Sample Time:** 1000 **Field Duplicate Sample Time:** **Time Sampling Ended:** 1031

Sampling Comments: Initially pumps w/YSI - not displaying decent purge parameters @0946; resumed @0951 · flow thru cell emptied @0957 Hydrolab Datasnell measurements: Temp=13.6 °C SpC=0.708 mS/cm DO=3.63 mg/L ORP=44 mV

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW05-20110519	2x40ml VOA	HCl	☒ No	0.45	0.10	MNA
	1x500ml P/UV	H2SO4	☒ No	0.45	0.10	
	2x500ml P/UV	—	☒ No	0.45	0.10	
	1x250ml P/UV	ZnAc	☒ No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: Color (describe): Clear, lots of yellow/orange sediments

Total Discharged (1Gal = 3.88 liter): ~1.75 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other:

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☒ NO ⟹ Describe: Bolts bit rusty

Water in Monument? ☐ NO ☒ YES ⟹ Describe: below TOC

Additional Well Condition Comments or Explanation of any Access Issues:

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Sound

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCR | Project #: 0592

Site Name/#: Calfax | Field/Sampling Personnel: D. Mendel | **Well ID Number:** MW06

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter					Casing Volume =WC x VC
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
18.5 Feet BTOC	6.94 Feet BTOC	11.56 Feet BTOC	0.023	0.041	0.17	0.65	1.44	1.97 gallons

Screened Interval: 5.5 to 18.5 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: _____ Owner/ID #: Krause

Water Quality Meter Brand/Model: Hydrolab / DRT15C Owner/ID #: Krause

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: _____ Owner/ID #: SCS

Sampling

Depth of Tubing Intake: ~10' Feet BTOC | Time Start Purge: 1215

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% If <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% If ≤1.00, ± 0.2	Temperature (ºC)	ORP (mV)
1219	6.95	0.1		0.7996	175.8	1.50	24.97	-63
1222	6.96	0.1		0.8138	161.6	0.64	20.15	-85
1225	6.96	0.1		0.8195	153.3	0.51	19.65	-107
1228	6.97	0.1		0.8306	138.0	0.45	19.82	-113
1231	6.97	0.1		0.8352	129.3	0.43	19.48	-115
1234	6.97	0.1		0.8558	124.0	0.57	17.31	-109
Minimum # of Readings								
1237	6.97	0.1		0.8412	113.6	0.56	17.50	-112
1240	6.97	0.1		0.8438	109.1	0.47	16.85	-115
1243	6.97	0.15		0.8397	98.5	0.45	16.45	-116
1246	6.97	0.15		0.8535	90.3	0.43	15.97	-117
1249	6.97	0.15		0.8585	80.9	0.42	14.81	-117
1252	6.97	0.15		0.8548	70.2	0.40	14.55	-119
1255	6.97	0.15		0.8561	63.2	0.52	15.58	-119

Sample Date: 5/17/11 **Sample Time:** 1316 **Field Duplicate Sample Time:** _____ **Time Sampling Ended:** 1344

Sampling Comments: Down well measurements: Temp = 19.78 °C SpC = 0.8448 mS/cm DO = 0.46 mg/L ORP = -120 mV
Replaced tubing in well prior to purging due to dirtiness of old tubing; replaced 3-ply pH measured w/ Quanta to be 7.18

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
MW06-20110517	5 x 40ml VOA	HCl	(No)	0.45	0.10	6x BTEX + MtBE + MNA
	1 x 500ml AG-B	—	(No)	0.45	0.10	DRPH + ORPH
	1 x 500ml Poly	—	(No)	0.45	0.10	field pH
	1 x 500ml Poly	H2SO4	(No)	0.45	0.10	MNA
	2 x 500ml Poly	—	(No)	0.45	0.10	MNA
	1 x 250(?)ml Poly	ZnAc	(No)	0.45	0.10	MNA

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: _____ Color (describe): Cloudy Gray / Brown

Total Discharged (1Gal = 3.88 liter): ~1.5 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: _____

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☐ YES ☒ NO ⟹ Describe: No bolts

Water in Monument? ☐ NO ☒ YES ⟹ Describe: below TOC

Additional Well Condition Comments or Explanation of any Access Issues: _____

[1] At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Sound

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP – *Continued*

General Info

Client: NCPI Project #: 0592

Site Name/ #: Colfax Field/Sampling Personnel: D. Merrill **Well ID Number:** MW06

See Page 1 for well construction and purge water information

Sample Date: 5/17/11 **Sample Time:** 1310 **Field Duplicate Sample Time:** — **Time Sampling Ended:** 1344

Sampling *(Continued from Page 1)*

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] *± 0.1*	Specific Conductivity[1] UNITS: mS/cm *± 3%*	Turbidity[1] (NTU) *If ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% if ≤1.00, ± 0.2*	Temperature (°C)	ORP (mV)
1258	6.97	0.15		0.8526	56.0	0.38	15.72	-118
1301	6.97	0.15		0.8388	51.8	0.36	15.45	-115
1304	6.98	0.15		0.8443	49.8	0.37	15.29	-116
1307	6.98	0.15		0.8408	47.2	0.36	15.70	-116

Additional Sampling Comments:

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

Soundearth

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

General Info

Client: NCPC | Project #: 0592

Site Name/ #: Colfax | Field/Sampling Personnel: D. Mundell | **Well ID Number:** CMW05

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) =TD-DTW	Casing Diameter					Casing Volume =WC x VC
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
16.5 Feet BTOC	6.92 Feet BTOC	9.58 Feet BTOC	0.023	0.041	0.17	0.65	1.44	1.63 gallons

Screened Interval: 6.5 to 16.5 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: _ Owner/ID #: Krause

Water Quality Meter Brand/Model: Hydrolab DS5 Owner/ID #: K

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: _ Owner/ID #: 52-55

Sampling

Depth of Tubing Intake: ~10 Feet BTOC Time Start Purge: 1036

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% if <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% if ≤1.00, ± 0.2	Temperature (°C)	ORP (mV)
1038	6.92	0.1		0.9983	58.0	2.50	14.23	-15
1044	6.92	0.1		0.9718	43.3	1.25	12.95	-31
1047	6.92	0.1		0.9662	28.7	1.06	12.12	-35
1050	6.92	0.1		0.9662	26.7	0.84	12.08	-40
1053	6.92	0.1		0.9596	25.0	0.69	12.16	-42
1056	6.92	0.1		0.9598	21.3	0.60	12.35	-45
Minimum # of Readings								
1057	6.92	0.1		0.9514	19.8	0.55	12.50	-48
1102	6.92	0.15		0.9513	21.2	0.52	12.63	-51
1105	6.92	0.15		0.9443	14.3	0.45	12.41	-57
1108	6.92	0.15		0.9360	13.4	0.45	12.42	-59
1111	6.92	0.15		0.9391	13.6	0.43	12.60	-59
~~1114~~								

Sample Date: 5/17/11 Sample Time: 1115 Field Duplicate Sample Time: _ Time Sampling Ended: 1135

Sampling Comments: Down-well parameters: SpC = 0.9443 mS/cm DO = 0.96 mg/L Temp = 11.13 °C ORP = -63 mV pH measured w/ Quanta @ be 7.24

Analytical

Sample Number/ID	Container Type	Preservative	Field Filtered?			Analysis Request
CMW05-20110517	1 x 500ml Poly	—	No	0.45	0.10	Field measured pH
"	2 x 40ml VOA	HCl	No	0.45	0.10	MNA
"	1 x 500ml Poly	H2SO4	No	0.45	0.10	"
"	2 x 500ml Poly	—	No	0.45	0.10	"
"	1 x 500(?)ml Poly	ZnAc	No	0.45	0.10	"
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES Odor? ☒ NO ☐ YES ⟹ Describe: _ Color (describe): Clear, some initial red grit

Total Discharged (1Gal = 3.88 liter): ~ 1.05 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: _

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☐ YES ☒ NO ⟹ Describe: CW left unremovable, unusable

Water in Monument? ☒ NO ☐ YES ⟹ Describe: _

Additional Well Condition Comments or Explanation of any Access Issues: _

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

APPENDIX C
LABORATORY ANALYTICAL REPORTS

Soil Analytical Results

Friedman & Bruya, Inc. #008196

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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August 30, 2010

Ryan Bixby, Project Manager
Sound Environmental Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Bixby:

Included are the results from the testing of material submitted on August 18, 2010 from the NCPC_0592-001_20100818, F&BI 008196 project. There are 3 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Chuck Cacek
SOU0830R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 18, 2010 by Friedman & Bruya, Inc. from the Sound Environmental Strategies NCPC_0592-001_20100818, F&BI 008196 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Sound Environmental Strategies
008196-01	SP18-4-5
008196-02	SP18-6-7
008196-03	SP18-9-10
008196-04	SP18-12-13
008196-05	SP19-3-4
008196-06	SP19-5-6
008196-07	SP19-7-8
008196-08	SP19-10-11

All quality control requirements were acceptable.

Date of Report: 08/30/10
Date Received: 08/18/10
Project: NCPC_0592-001_20100818, F&BI 008196
Date Extracted: 08/23/10
Date Analyzed: 08/24/10

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITHGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 53-144)
SP18-4-5 008196-01	ND	ND	ND	97
SP18-9-10 008196-03	ND	ND	ND	100
SP19-3-4 008196-05	ND	ND	ND	98
SP19-7-8 008196-07	ND	ND	ND	100
Method Blank 00-1312 MB	ND	ND	ND	100

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

008196

SAMPLE CHAIN OF CUSTODY

ME 08/18/10 CI2/VS1

Page # 1 of 1

Send Report To R. Bixby, C. Cacek

Company Sound Environmental Strategies

Address 3811 Fairview Ave E Ste. 2000

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature) David Mendel

PROJECT NAME/NO. NCPC / 0592-001

PO #

REMARKS Hold Samples

GEMS Y / N

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	NWTPH-HCID		Notes
SP18-4-5	SP18	4-5	01AG	8/16/10	1246	Soil	7							X		HOLD
SP18-6-7	↓	6-7	02AG	↓	1259	↓	↓									
SP18-9-10		9-10	03AG		1305									X		
SP18-12-13	↓	12-13	04AG		1315											
SP19-3-4	SP19	3-4	05AG		1320									X		
SP19-5-6	↓	5-6	06AG		1325											
SP19-7-8		7-8	07AG		1335									X		
SP19-10-11	↓	10-11	08AG	↓	1343	↓	↓									↓

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-3999
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mendel	David Mendel	SES	8/18/10	1235
Received by:	Nhan Phan	Nhan Phan	FEBT	8/18/10	✓
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 2 °C

Groundwater Analytical Results Third Quarter 2010

Am Test Inc. #008234

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project #: 008234
PO Number: A-591
All results reported on an as received basis.

Date Received: 09/08/10
Date Reported: 9/10/10

AMTEST Identification Number **10-A014976**
Client Identification **MW02-20100818**
Sampling Date **08/10/10, 15:50**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.01	mg/l		0.01	SM 3500	NLN	09/09/10

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	17.7	mg/l		0.005	EPA 200.7	KF	09/10/10
Manganese	5.97	mg/l		0.0005	EPA 200.7	KF	09/10/10

AMTEST Identification Number **10-A014977**
Client Identification **MW12-20100818**
Sampling Date **08/10/10, 14:08**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.03	mg/l		0.01	SM 3500	NLN	09/09/10

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	4.03	mg/l		0.005	EPA 200.7	KF	09/10/10
Manganese	8.85	mg/l		0.0005	EPA 200.7	KF	09/10/10

AMTEST Identification Number **10-A014978**
Client Identification **MW13-20100818**
Sampling Date **08/10/10, 17:37**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.03	mg/l		0.01	SM 3500	NLN	09/09/10

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	10.1	mg/l		0.005	EPA 200.7	KF	09/10/10
Manganese	2.00	mg/l		0.0005	EPA 200.7	KF	09/10/10

AMTEST Identification Number **10-A014979**
Client Identification **MW25-20100818**
Sampling Date **08/10/10, 15:23**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.13	mg/l		0.01	SM 3500	NLN	09/09/10

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	1.17	mg/l		0.005	EPA 200.7	KF	09/10/10
Manganese	8.00	mg/l		0.0005	EPA 200.7	KF	09/10/10

AMTEST Identification Number **10-A014980**
Client Identification **MW26-20100818**
Sampling Date **08/10/10, 09:56**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.09	mg/l		0.01	SM 3500	NLN	09/09/10

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	16.0	mg/l		0.005	EPA 200.7	KF	09/10/10
Manganese	5.87	mg/l		0.0005	EPA 200.7	KF	09/10/10

AMTEST Identification Number **10-A014981**
Client Identification **CMW05-20100818**
Sampling Date **08/10/10, 18:55**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.07	mg/l		0.01	SM 3500	NLN	09/09/10

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	9.39	mg/l		0.005	EPA 200.7	KF	09/10/10
Manganese	5.10	mg/l		0.0005	EPA 200.7	KF	09/10/10

Kathy Fuglel
President

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 10-A014976 to 10-A014981

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
10-A014979	Iron	mg/l	1.17	1.10	6.2
10-A014979	Ferrous Iron	mg/l	0.13	0.13	0.00
10-A014979	Manganese	mg/l	8.00	7.88	1.5

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Iron	mg/l	10.0	10.2	102. %
Ferrous Iron	mg/l	0.25	0.29	116. %
Manganese	mg/l	1.00	0.930	93.0 %

BLANKS

ANALYTE	UNITS	RESULT
Iron	mg/l	< 0.005
Ferrous Iron	mg/l	< 0.01
Manganese	mg/l	< 0.0005

Aquatic Research Incorporated #FBI007-04

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: **FBI007-04** **PAGE 1**

REPORT DATE: **09/07/10**

DATE SAMPLED: **08/18,19/10** **DATE RECEIVED:** **08/20/10**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 008234

CASE NARRATIVE

Ten water samples were received by the laboratory in good condition and analyzed according to the chain of custody. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on subsequent pages.

SAMPLE DATA

SAMPLE ID	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
MW02-20100818	259	13.2	<0.05	0.892	0.682
MW12-20100818	415	25.7	<0.05	0.202	0.451
MW13-20100818	311	5.03	<0.05	0.208	0.439
MW25-20100818	369	8.50	<0.05	0.425	0.664
MW26-20100818	352	11.8	<0.05	1.24	0.774
CWW05-20100818	449	22.4	<0.05	1.55	0.280

SAMPLE ID	TDS (mg/L)	NITRATE (mg/L)	NITRITE (mg/L)	COD (mg/L)	BOD5 (mg/L)
MW02-20100818	365	0.015	<0.002	<10.0	4.90
MW05-20100818	412	0.065	0.006	<10.0	2.66
MW08-20100818	477	5.88	0.043	<10.0	<2.00
MW09-20100818	304	0.021	<0.002	14.7	<2.00
MW12-20100818	557	0.092	0.003	<10.0	<2.00
MW13-20100818	397	0.190	0.002	<10.0	<2.00
MW21-20100818	389	0.018	0.002	10.8	3.16
MW25-20100818	357	0.014	<0.002	<10.0	<2.00
MW26-20100818		0.031	0.002		
CWW05-20100818		0.017	<0.002		

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

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PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: **FBI007-04**

REPORT DATE: **09/07/10**

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FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 008234

QA/QC DATA

QC PARAMETER	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	08/30/10	08/25/10	08/25/10	08/27/10	08/27/10
DETECTION LIMIT	1.00	1.00	0.05	0.002	0.200
DUPLICATE					
SAMPLE ID	BATCH	CWW05-20100818	CWW05-20100818	CWW05-20100818	CWW05-20100818
ORIGINAL	77.6	22.4	<0.05	1.55	0.280
DUPLICATE	76.0	22.8	<0.05	1.54	0.282
RPD	2.12%	1.51%	NC	0.31%	0.65%
SPIKE SAMPLE					
SAMPLE ID		CWW05-20100818		CWW05-20100818	CWW05-20100818
ORIGINAL		22.4		1.55	0.280
SPIKED SAMPLE		32.7		1.60	2.27
SPIKE ADDED		10.0		0.050	2.00
% RECOVERY	NA	102.20%	NA	104.80%	99.54%
QC CHECK					
FOUND	98.1	10.2		0.089	5.43
TRUE	100	10.0		0.090	5.79
% RECOVERY	98.10%	101.94%	NA	98.63%	93.84%
BLANK	NA	<1.00	<0.05	<0.002	<0.200

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: **FBI007-04** **PAGE 3**

REPORT DATE: **09/07/10**

DATE SAMPLED: **08/18,19/10** **DATE RECEIVED:** **08/20/10**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 008234

QA/QC DATA

QC PARAMETER	TDS (mg/L)	NITRATE (mg/L)	NITRITE (mg/L)	COD (mg/L)	BOD5 (mg/L)
METHOD	SM18 2540C	SM184500N03F	EPA 353.2	SM18 5220D	SM 5210B
DATE ANALYZED	08/25/10	08/20/10	08/20/10	09/07/10	08/20/10
DETECTION LIMIT	5.0	0.010	0.002	10.0	2.00
DUPLICATE					
SAMPLE ID	MW25-20100818	CWW05-20100818	CWW05-20100818	BATCH	MW25-20100818
ORIGINAL	357	0.017	<0.002	81.5	<2.00
DUPLICATE	354	0.017	<0.002	77.4	<2.00
RPD	0.84%	0.81%	NC	5.16%	NC
SPIKE SAMPLE					
SAMPLE ID		CWW05-20100818	CWW05-20100818	BATCH	
ORIGINAL		0.017	<0.002	81.5	
SPIKED SAMPLE		0.210	0.040	135	
SPIKE ADDED		0.200	0.040	50.0	
% RECOVERY	NA	96.57%	100.00%	107.37%	NA
QC CHECK					
FOUND		0.405	0.040	94.9	4.23
TRUE		0.408	0.040	100	4.62
% RECOVERY	NA	99.33%	100.00%	94.87%	91.56%
BLANK	<5.0	<0.010	<0.002	<10.0	<2.00

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

SUBMITTED BY:

Steven Lazoff
Laboratory Director

Anatek Labs, Inc. #100819018

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: SOUND ENVIRONMENTAL STRATEGIES
Address: 2811 FAIRVIEW AVE E STE 2000
SEATTLE, WA 98102
Attn: R BIXBY / C CACEK

Batch #: 100819018
Project Name: 0592-001 / COLFAX

Analytical Results Report

Sample Number	100819018-001	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010	1:53 PM	
Client Sample ID	MW12-20100818	**Sampling Time**	2:08 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

Sample Number	100819018-002	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010	1:53 PM	
Client Sample ID	MW21-20100818	**Sampling Time**	2:40 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

Sample Number	100819018-003	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010	1:53 PM	
Client Sample ID	MW25-20100818	**Sampling Time**	3:23 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: SOUND ENVIRONMENTAL STRATEGIES
Address: 2811 FAIRVIEW AVE E STE 2000
SEATTLE, WA 98102
Attn: R BIXBY / C CACEK

Batch #: 100819018
Project Name: 0592-001 / COLFAX

Analytical Results Report

Sample Number	100819018-004	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010	1:53 PM	
Client Sample ID	MW02-20100818	**Sampling Time**	3:50 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

Sample Number	100819018-005	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010	1:53 PM	
Client Sample ID	MW09-20100818	**Sampling Time**	4:35 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

Sample Number	100819018-006	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010	1:53 PM	
Client Sample ID	MW05-20100818	**Sampling Time**	5:22 PM	**Extraction Date**			
Matrix	Water	**Sample Location**					
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

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:	SOUND ENVIRONMENTAL STRATEGIES	**Batch #:**	100819018
Address:	2811 FAIRVIEW AVE E STE 2000 SEATTLE, WA 98102	**Project Name:**	0592-001 / COLFAX
Attn:	R BIXBY / C CACEK		

Analytical Results Report

Sample Number	100819018-007	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010 1:53 PM
Client Sample ID	MW13-20100818	**Sampling Time**	5:37 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

Sample Number	100819018-008	**Sampling Date**	8/18/2010	**Date/Time Received**	8/19/2010 1:53 PM
Client Sample ID	MW08-20100818	**Sampling Time**	6:45 PM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Fecal Coliform	<2	MPN/100mL	2	8/20/2010	KEA	SM9221E	

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.

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.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Login Report

Customer Name: SOUND ENVIRONMENTAL STRATEGIES
2811 FAIRVIEW AVE E STE 2000
SEATTLE WA 98102

Order ID: 100819018
Order Date: 8/19/2010

Contact Name: R BIXBY / C CACEK

Project Name: 0592-001 / COLFAX

Comment:

Sample #: 100819018-001 **Customer Sample #:** MW12-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Sample #: 100819018-002 **Customer Sample #:** MW21-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Sample #: 100819018-003 **Customer Sample #:** MW25-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Customer Name: SOUND ENVIRONMENTAL STRATEGIES
2811 FAIRVIEW AVE E STE 2000
SEATTLE WA 98102

Order ID: 100819018
Order Date: 8/19/2010

Contact Name: R BIXBY / C CACEK

Project Name: 0592-001 / COLFAX

Comment:

Sample #: 100819018-004 **Customer Sample #:** MW02-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Sample #: 100819018-005 **Customer Sample #:** MW09-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Sample #: 100819018-006 **Customer Sample #:** MW05-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Sample #: 100819018-007 **Customer Sample #:** MW13-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

Customer Name: SOUND ENVIRONMENTAL STRATEGIES
2811 FAIRVIEW AVE E STE 2000
SEATTLE WA 98102

Order ID: 100819018
Order Date: 8/19/2010

Contact Name: R BIXBY / C CACEK

Project Name: 0592-001 / COLFAX

Comment:

Sample #: 100819018-008 **Customer Sample #:** MW08-20100818

Recv'd: ☑ **Collector:** DM **Date Collected:** 8/18/2010
Quantity: 1 **Matrix:** Water **Date Received:** 8/19/2010 1:53:00 P
Comment:

Test	Method	Due Date	Priority
BACT - FECAL COLIFORMS	SM9221E	8/19/2010	***Normal (6-10 Days)***

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature inside the cooler?	2.4
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	ICE
Are VOC samples free of headspace?	N/A
Is there a trip blank to accompany VOC samples?	N/A
Labels and chain agree?	Yes

SAMPLE CHAIN OF CUSTODY

100819 018 SES Last Due 8/19/2010
1st SAMP 8/18/2010 1st RCVD 8/19/2010
0592-001 / COLFAX

Send Report To R Bixby, C. Cook
Company Sound Environmental Strategies
Address 2811 Fairview Ave E, Ste. 2000
City, State, ZIP Seattle, WA 98102
Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)
PROJECT NAME/NO. 0592-001 / Colfax
REMARKS

Pr
GEMS Y / N

☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	RCRA-8 Metals	Fecal Coliform		Notes
MW12-20100818	MW12	12'		8/18/10	1408	H20	1							X		
MW21-20100818	MW21	12'		"	1440	"	"							X		
MW25-20100818	MW25	11'		"	1523	"	"							X		
MW02-20100818	MW02	13'		"	1550	"	"							X		
MW09-20100818	MW09	12		"	1635	"	"							X		
MW05-20100818	MW05	13		"	1722	"	"							X		
MW13-20100818	MW13	12		"	1737	"	"							X		
MW08-20100818	MW08	11		↓	1845	↓	↓							X		Huber del.
																Cooler/ice 2.4°

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mandel	SES	8/18/10	
Received by:	K Scott	Anatek	8-19-10	1353
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 2.4 °C

Groundwater Analytical Results Fourth Quarter 2010

Friedman & Bruya, Inc. #011250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 7, 2010

Chuck Cacek, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Cacek:

Included are the results from the testing of material submitted on November 19, 2010 from the NCPC_0592-001_20101119, F&BI 011250 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ryan Bixby
SOU1207R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2010 by Friedman & Bruya, Inc. from the Sound Environmental Strategies NCPC_0592-001_20101119, F&BI 011250 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Sound Environmental Strategies
011250-01	MW20-20101116
011250-02	MW19-20101116
011250-03	MW31-20101116
011250-04	MW17-20101116
011250-05	MW30-20101116
011250-06	MW18-20101116
011250-07	MW16-20101116
011250-08	MW09-20101116
011250-09	MW10-20101116
011250-10	MW32-20101116
011250-11	MW29-20101117
011250-12	MW13-20101117
011250-13	MW98-20101117
011250-14	MW99-20101117
011250-15	MW28-20101117
011250-16	MW11-20101117
011250-17	MW26-20101117
011250-18	MW12-20101117
011250-19	MW27-20101117
011250-20	MW25-20101117
011250-21	MW02-20101117
011250-22	CMW05-20101117
011250-23	MW03-20101118
011250-24	MW01-20101118
011250-25	MW07-20101118

Samples MW13-20101117, MW26-20101117, MW12-20101117, MW25-20101117, MW02-20101117, CMW05-20101117, MW03-20101118, and MW07-20101118 were sent to Aquatic Research for sulfate, sulfide, total kjedahl nitrogen, phosphorus, nitrate, and nitrite analyses. In addition, the same samples were sent to Fremont Analytical for dissolved methane analysis. Review of the enclosed reports indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

011250

SAMPLE CHAIN OF CUSTODY

ME 11-19-10 VS/BOS/ AI6

Send Report To Chuck Cacek

Company SoundEarth Strategies

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO.: NCPC / 0592-001

PO #:

REMARKS: Natural Attenuation = Sulfate, Sulfide, Methane, Total Kjeld. N3, Phosphorus, Nitrates, Nitrites

GEMS Y / N

Page # 1 of 2

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead VOCs by 8260	Dissolved Lead SVOCs by 8270	Natural Attenuation RCRA-8 Metals			Notes
MW20-20101116	MW20	12	01	11/16/10	1234	H2O	1	X								
MW19-20101116	MW19	16	02 A-E		1245		5	X	X	X						
MW31-20101116	MW31	10	03 A-E		1318		5	X	X	X						
MW17-20101116	MW17	15	04 A-C		1338		(NA) ~~5~~ (3)	X	X	X						
MW30-20101116	MW30	10.5	05 A-E		1418		5	X	X	X						
MW18-20101116	MW18	15	06 A-E		1423		5	X	X	X						
MW16 20101116	MW16	15	07 A-E		1526		5	X	X	X						
MW09-20101116	MW09	11.5	08		1526		1	X								
MW10-20101116	MW10	11.5	09		1620		1	X								
MW32-20101116	MW32	12	10 A-E	↓	1624		5	X	X	X						
MW29-20101117	MW29	12	11 A-E	11/17/10	1004		5	X	X	X						
MW13-20101117	MW13	12.5	12 A-J		1005		10	X	X	X			X			
MW28-20101117	MW28	12	13 A-E	↓	1019	↓	5	X	X	X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		David Mendel	SES	11/19/10	0850
Received by:		Nhan Pham	FEBI	11/19/10	0852
Relinquished by:					
Received by:			Samples received at 2 °C		

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011250

SAMPLE CHAIN OF CUSTODY

ME 11-19-10 V5/B05/AT6

Send Report To Chuck Cacek

Company SoundEarth Strategies

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO.: NCPC/0592-001

PO #

REMARKS: Natural Attenuation = Sulfate, Sulfide, Methane, Total Kjeh. N2, Phosphorus, Nitrates, Nitrites

GEMS Y / N

Page # 2 of 2

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead ~~VOCs by 8260~~	Dissolved lead ~~SVOCs by 8270~~	Natural Attenuation RCRA 8 Metals			Notes
MW99-20101117	MW99	12.5	14 A-E	11/17/10	1130	H2O	5	X	X	X						
MW28-20101117	MW28	14	15 A-E	"	1226	"	5	X	X	X						
MW11-20101117	MW11	11.5	16 A-E	"	1239	"	5	X	X	X						
MW26-20101117	MW26	12	17 A-J	"	1338	"	10	X	X	X			X			
MW12-20101117	MW12	11.5	18 A-E	"	1350	"	5						X			
MW27-20101117	MW27	13	19 A-G	"	1545	"	7	X	X	X	X	X				
MW25-20101117	MW25	11.5	20 A-E	"	1548	"	5						X			
MW02-20101117	MW02	12	21 A-E	"	1729	"	5						X			
CMW05-20101117	CMW05	11.5	22 A-E	"	1738	"	5						X			
MW03-20101118	MW03	13.5	23 A-E	11/18/10	0945	"	5						X			
MW01-20101118	MW01	15	24	"	0954	"	1	X								
MW07-20101118	MW07	15	25 A-E	"	1057	"	5						X			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		David Mendel	SES	11/19/10	0850
Received by:		Khan Phan	FEBI	11/19/10	0856
Relinquished by:					
Received by:			Samples received at 2 °C		

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Aquatic Research Incorporated #FBI007-37

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**FBI007-37**		**PAGE 1**
REPORT DATE:	**12/03/10**		
DATE SAMPLED:	**11/17,18/10**	**DATE RECEIVED:**	**11/19/10**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 011250

CASE NARRATIVE

Eight water samples were received by the laboratory in good condition and analyzed according to the chain of custody. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on subsequent pages.

SAMPLE DATA

SAMPLE ID	NITRATE (mg/L)	NITRITE (mg/L)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
MW13-20101117	0.882	0.004	7.50	<0.05	0.205	0.764
MW26-20101117	0.016	<0.002	10.6	<0.05	1.32	1.31
MW12-20101117	0.120	0.002	26.1	<0.05	0.182	0.891
MW25-20101117	0.688	0.003	6.81	<0.05	0.222	1.01
MW02-20101117	0.024	<0.002	16.4	<0.05	1.58	1.02
CMW05-20101117	0.015	<0.002	19.8	<0.05	0.799	0.756
MW03-20101118	0.020	<0.002	15.1	<0.05	1.12	0.995
MW07-20101118	0.060	0.005	9.49	<0.05	0.972	1.17

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: FBI007-37 **PAGE 2**

REPORT DATE: 12/03/10

DATE SAMPLED: 11/17,18/10 **DATE RECEIVED:** 11/19/10

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 011250

QA/QC DATA

QC PARAMETER	NITRATE (mg/L)	NITRITE (mg/L)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM184500N03F	EPA 353.2	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	11/19/10	11/19/10	11/29/10	11/24/10	11/19/10	12/01/10
DETECTION LIMIT	0.010	0.002	1.00	0.05	0.002	0.200
DUPLICATE						
SAMPLE ID	MW07-20101118	MW07-20101118	MW07-20101118	MW07-20101118	MW07-20101118	MW07-20101118
ORIGINAL	0.060	0.005	9.49	<0.05	0.972	1.17
DUPLICATE	0.062	0.005	9.61	<0.05	0.980	1.32
RPD	3.28%	0.00%	1.28%	NC	0.89%	12.58%
SPIKE SAMPLE						
SAMPLE ID	MW07-20101118	MW07-20101118	MW07-20101118		MW07-20101118	MW07-20101118
ORIGINAL	0.060	0.005	9.49		0.972	1.17
SPIKED SAMPLE	0.270	0.045	19.8		1.02	3.27
SPIKE ADDED	0.200	0.040	10.0		0.050	2.00
% RECOVERY	105.00%	100.00%	103.06%	NA	97.98%	105.29%
QC CHECK						
FOUND	0.404	0.040	10.0		0.090	5.85
TRUE	0.408	0.040	10.0		0.090	5.79
% RECOVERY	99.14%	100.00%	100.00%	NA	100.10%	101.09%
BLANK	<0.010	<0.002	<1.00	<0.05	<0.002	<0.200

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

SUBMITTED BY:

Steven Lazoff
Laboratory Director

Fremont Analytical #CHEM101122-1

2930 Westlake Ave N Suite 100
Seattle, WA 98109
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman and Bruya, Inc.
Attn: Michael Erdahl
3012 16th Ave W.
Seattle, WA 98119

RE: 011250
Fremont Project No: CHM101122-1

December 2nd, 2010

Michael:

Enclosed are the analytical results for the ***011250*** *water* samples submitted to Fremont Analytical on November 22nd, 2010.

Examination of these samples was conducted for the presence of the following:

- ***Dissolved Gases (Methane) by RSK-175***

This application was performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied.

Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical!

Sincerely,

Michael Dee
Sr. Chemist / Principal

mikedee@fremontanalytical.com

Fremont Analytical

2930 Westlake Ave . N., Suite 100
Seattle, WA 98109

T: 206.352.3790
F: 206-352-7178
email: info@fremontanalytical.com

Analysis of Dissolved Gases by RSK-175

Project: 011250
Client: Friedman & Bruya
Client Project #: A-708
Lab Project #: CHM101122-1

RSK-175 (mg/L)	MRL	Method Blank	LCS	MW13-20101117	MW26-2010117	MW12-20101117
Date Extracted		11/24/10	11/24/10	11/24/10	11/24/10	11/24/10
Date Analyzed		11/24/10	11/24/10	11/24/10	11/24/10	11/24/10
Matrix				Water	Water	Water
Methane	0.005	nd	86%	**0.176**	**0.164**	nd

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
* Instrument Detection Limit
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD = 80% to 120%
Spike Concentration = 100 PPMV

Fremont Analytical

2930 Westlake Ave . N., Suite 100
Seattle, WA 98109

T: 206.352.3790
F: 206-352-7178
email: info@fremontanalytical.com

Analysis of Dissolved Gases by RSK-175

Project: 011250
Client: Friedman & Bruya
Client Project #: A-708
Lab Project #: CHM101122-1

RSK-175 (mg/L)	MRL	MW25-20101117	MW02-20101117	Duplicate MW02-20101117	RPD %
Date Extracted		11/24/10	11/24/10	11/24/10	
Date Analyzed		11/24/10	11/24/10	11/24/10	
Matrix		Water	Water	Water	
Methane	0.005	**0.091**	**0.268**	**0.301**	12%

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
* Instrument Detection Limit
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD = 80% to 120%
Spike Concentration = 100 PPMV

Fremont Analytical

2930 Westlake Ave . N., Suite 100
Seattle, WA 98109

T: 206.352.3790
F: 206-352-7178
email: info@fremontanalytical.com

Analysis of Dissolved Gases by RSK-175

Project: 011250
Client: Friedman & Bruya
Client Project #: A-708
Lab Project #: CHM101122-1

RSK-175 (mg/L)	MRL	CMW05-20101117	MW03-20101118	MW07-20101118
Date Extracted		11/24/10	11/24/10	11/24/10
Date Analyzed		11/24/10	11/24/10	11/24/10
Matrix		Water	Water	Water
Methane	0.005	**0.030**	**0.153**	**0.109**

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
* Instrument Detection Limit
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD = 80% to 120%
Spike Concentration = 100 PPMV

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

CHM101122-1

Page # 1 of 1

Send Report To: Michael Erdahl

Company: Friedman and Bruya, Inc.

Address: 3012 16th Ave W

City, State, ZIP: Seattle, WA 98119

Phone #: (206) 285-8282 Fax #: (206) 283-5044

SUBCONTRACTER: tmont

PROJECT NAME/NO.: 011250

PO #: A-708

REMARKS: Please Email Results merdahl@friedmanbruya.com

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	TPH	VPH	Nitrate	Sulfate	Alkalinity	Dissolved methane				Notes
						ANALYSES REQUESTED										
MW13-20101117		11/17/10		W	2							X				
MW26-20101117																
MW12-20101117																
MW25-20101117																
MW02-20101117																
CMW05-20101117																
MW03-20101118		11/18/10														
MW07-20101118																

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	11/22/10	1:00 PM
Received by:		Tony Zehr	F.B.	11/22/10	13:57
Relinquished by:					
Received by:					

Groundwater Analytical Results First Quarter 2011

Friedman & Bruya, Inc. #102185

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

March 9, 2011

Chuck Cacek, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Cacek:

Included are the results from the testing of material submitted on February 17, 2011 from the NCPC_0592-001_20110217, F&BI 102185 project. There is 1 page included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ryan Bixby
SOU0309R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 17, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies NCPC_0592-001_20110217, F&BI 102185 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
102185-01	MW25-20110215
102185-02	MW07-20110215
102185-03	MW12-20110216
102185-04	MW26-20110216

The samples were sent to Amtest for nitrate, nitrite, total iron, and ferrous iron analyses. The report is enclosed.

All quality control requirements were acceptable.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project #: 102185
PO Number: A-871
All results reported on an as received basis.

Date Received: 02/17/11
Date Reported: 3/ 7/11

AMTEST Identification Number **11-A002154**
Client Identification **MW25-20110215**
Sampling Date **02/15/11, 15:47**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.03	mg/l		0.01	SM 3500	NLN	02/23/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11
Nitrate	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	1.35	mg/l		0.005	EPA 200.7	HL	02/25/11

AMTEST Identification Number **11-A002155**
Client Identification **MW07-20110215**
Sampling Date **02/15/11, 17:55**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.06	mg/l		0.01	SM 3500	NLN	02/23/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11
Nitrate	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	24.0	mg/l		0.005	EPA 200.7	HL	02/25/11

AMTEST Identification Number **11-A002156**
Client Identification **MW12-20110216**
Sampling Date **02/10/11, 09:56**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.02	mg/l		0.01	SM 3500	NLN	02/23/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11
Nitrate	0.726	mg/l		0.050	EPA 300.0	MO	02/17/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	2.00	mg/l		0.005	EPA 200.7	HL	02/25/11

AMTEST Identification Number **11-A002157**
Client Identification **MW26-20110216**
Sampling Date **02/10/11, 11:45**

Conventionals

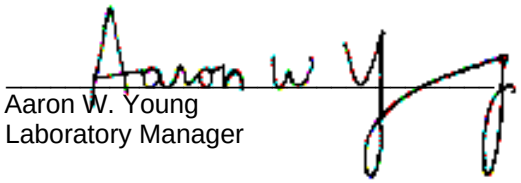
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.03	mg/l		0.01	SM 3500	NLN	02/23/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11
Nitrate	< 0.05	mg/l		0.050	EPA 300.0	MO	02/17/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	20.4	mg/l		0.005	EPA 200.7	HL	02/25/11



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 11-A002154 to 11-A002157

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
11-A002157	Nitrate	mg/l	< 0.05	< 0.05	
11-A002157	Nitrite	mg/l	< 0.05	< 0.05	
11-A002157	Ferrous Iron	mg/l	0.03	0.03	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
11-A002157	Nitrate	mg/l	< 0.05	0.558	0.500	111.60 %
11-A002157	Nitrite	mg/l	< 0.05	0.450	0.500	90.00 %
11-A002402	Ferrous Iron	mg/l	0.08	1.09	1.00	101.00 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	0.500	0.527	105. %
Nitrite	mg/l	0.500	0.490	98.0 %
Iron	mg/l	4.00	4.12	103. %
Ferrous Iron	mg/l	1.00	0.83	83.0 %
Ferrous Iron	mg/l	1.00	0.83	83.0 %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Iron	mg/l	< 0.005
Ferrous Iron	mg/l	< 0.01
Ferrous Iron	mg/l	< 0.01

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl
Company Friedman and Bruya, Inc.
Address 3012 16th Ave W
City, State, ZIP Seattle, WA 98119
Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Anatest
PROJECT NAME/NO. 102185
PO # A-871
REMARKS
Please Email Results
merdahl@friedmanandbruya.com

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	Nitrite	Total Fe	Fe 2+		Notes
MW25-20110215		2/15/11	1547	W	2				X			x	x	x		
MW07-20110215		↓	1755	↓	2				X			x	x	x		
MW12-20110216		2/16/11	0956		2				X			x	x	x		
MW26-20110216		↓	1145	↓	2				X			x	x	x		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	2/17/11	10:00 AM
Received by:					
Relinquished by:					
Received by:					

102185

SAMPLE CHAIN OF CUSTODY ME 2/17/11 AF 3

Send Report To C. Caeck, R. Bixby
Company SoundEarth Strategies
Address 2811 Fairview Ave E Suite 2000
City, State, ZIP Seattle, WA 98102
Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: NCPC / 0592-001

PO #:

REMARKS: Run 1 bottle for Nitrates & Nitrites, Hold 1 bottle for potential Fe^{+2} analysis

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Nitrates & Nitrites	Total Fe / Fe2	Notes
MW25-20110215	MW25	9	01 AF	2/15/11	1547	Water	2							X	✓	HOLD 1 Bottle
MW07-20110215	MW07	10	02 AF	2/15/11	1755	Water	2							X	✓	HOLD 1 bottle
MW12-20110216	MW12	10	03 AF	2/16/11	0956	Water	2							X	✓	HOLD 1 bottle
MW26-20110216	MW26	10	04 AF	2/16/11	1145	Water	2							X	✓	HOLD 1 bottle
																✓ - per cc 2/17/11 MG

2/16/11

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		David Mendel	SES	2/16/11	1345
Received by:		HONG NGUYEN	FBI	2/17/11	9:35
Relinquished by:					
Received by:					

Samples received at 2 °C

Friedman & Bruya, Inc. #102210

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

March 14, 2011

Chuck Cacek, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Cacek:

Included are the results from the testing of material submitted on February 18, 2011 from the NCPC_0592-001_20110218, F&BI 102210 project. There is 1 page included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ryan Bixby
SOU0314R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 18, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies NCPC_0592-001_20110218, F&BI 102210 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
102210-01	MW25-20110215
102210-02	MW07-20110215
102210-03	MW12-20110216
102210-04	MW26-20110216
102210-05	MW13-20110216
102210-06	MW02-20110216
102210-07	MW03-20110217
102210-08	CMW05-20110217
102210-09	MW25-20110217

Samples MW25-20110215, MW07-20110215, MW12-20110216, MW26-20110216, MW13-20110216, MW02-20110216, MW03-20110217, CMW05-20110217, and MW25-20110217 were sent to Amtest for sulfate, sulfide, total kjedahl nitrogen, phosphorus, alkalinity, ferrous iron, total iron, manganese, nitrate, and nitrite analyses. In addition, the same samples were sent to Fremont Analytical for dissolved methane analysis. Review of the enclosed reports indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Mar 11 2011
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl

Dear Michael Erdahl:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW25-20110215	Water	11-A002396	MIN, NUT, CONV, MET, Methane
MW07-20110215	Water	11-A002397	MIN, NUT, CONV, MET, Methane
MW12-20110216	Water	11-A002398	MIN, NUT, CONV, MET, Methane
MW26-20110216	Water	11-A002399	MIN, NUT, CONV, MET, Methane
MW13-20110216	Water	11-A002400	MIN, NUT, CONV, MET, Methane
MW02-20110216	Water	11-A002401	MIN, NUT, CONV, MET, Methane
MW03-20110217	Water	11-A002402	MIN, NUT, CONV, MET, Methane
CMW05-20110217	Water	11-A002403	MIN, NUT, CONV, MET, Methane
MW25-20110217	Water	11-A002404	CONV, MIN

Your samples were received on Friday, February 18, 2011. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

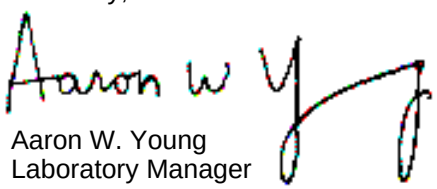
The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,



Aaron W. Young
Laboratory Manager

Project #: 102210
PO Number: A-871

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project #: 102210
PO Number: A-871
All results reported on an as received basis.

Date Received: 02/18/11
Date Reported: 3/11/11

AMTEST Identification Number **11-A002396**
Client Identification **MW25-20110215**
Sampling Date **02/15/11, 15:47**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	240	mg/l		1.0	SM 2320B	NLN	03/04/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	1.10	mg/l		0.100	EPA 351.2	KK	03/10/11
Total Phosphorus	0.287	mg/l		0.005	SM 4500-PE	KK	03/06/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	8.86	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	180	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002397**
Client Identification **MW07-20110215**
Sampling Date **02/15/11, 17:55**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	290	mg/l		1.0	SM 2320B	NLN	03/04/11
Sulfate	16.	mg/l		0.1	EPA 300.0	MO	03/02/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	1.08	mg/l		0.100	EPA 351.2	KK	03/10/11
Total Phosphorus	0.950	mg/l		0.005	SM 4500-PE	KK	03/06/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	5.39	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	65.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002398**
Client Identification **MW12-20110216**
Sampling Date **02/16/11, 09:56**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	310	mg/l		1.0	SM 2320B	NLN	03/04/11
Sulfate	20.	mg/l		0.1	EPA 300.0	MO	03/02/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	1.00	mg/l		0.100	EPA 351.2	KK	03/10/11
Total Phosphorus	0.166	mg/l		0.005	SM 4500-PE	KK	03/02/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	6.41	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	< 1.3	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002399**
Client Identification **MW26-20110216**
Sampling Date **02/16/11, 11:45**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	280	mg/l		1.0	SM 2320B	NLN	03/04/11
Sulfate	11.	mg/l		0.1	EPA 300.0	MO	03/02/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	1.60	mg/l		0.100	EPA 351.2	KK	03/10/11
Total Phosphorus	1.00	mg/l		0.005	SM 4500-PE	KK	03/06/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	4.42	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	82.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002400**
Client Identification **MW13-20110216**
Sampling Date **02/16/11, 15:53**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11
Ferrous Iron	0.02	mg/l		0.01	SM 3500	NLN	02/23/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	190	mg/l		1.0	SM 2320B	NLN	03/04/11
Sulfate	8.9	mg/l		0.1	EPA 300.0	MO	02/18/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.704	mg/l		0.100	EPA 351.2	KK	03/10/11
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/18/11
Nitrate	1.76	mg/l		0.050	EPA 300.0	MO	02/18/11
Total Phosphorus	0.167	mg/l		0.005	SM 4500-PE	KK	03/02/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	3.13	mg/l		0.005	EPA 200.7	HL	02/25/11
Manganese	1.10	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	32.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002401**
Client Identification **MW02-20110216**
Sampling Date **02/16/11, 17:39**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11
Ferrous Iron	< 0.01	mg/l		0.01	SM 3500	NLN	02/23/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	230	mg/l		1.0	SM 2320B	NLN	03/04/11
Sulfate	26.	mg/l		0.1	EPA 300.0	MO	02/18/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.570	mg/l		0.100	EPA 351.2	KK	03/10/11
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/18/11
Nitrate	2.38	mg/l		0.050	EPA 300.0	MO	02/18/11
Total Phosphorus	0.151	mg/l		0.005	SM 4500-PE	KK	03/02/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	1.51	mg/l		0.005	EPA 200.7	HL	02/25/11
Manganese	0.676	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	6.3	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002402**
Client Identification **MW03-20110217**
Sampling Date **02/17/11, 09:14**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11
Ferrous Iron	0.08	mg/l		0.01	SM 3500	NLN	02/23/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	240	mg/l		1.0	SM 2320B	NLN	03/04/11
Sulfate	13.	mg/l		0.1	EPA 300.0	MO	02/18/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.903	mg/l		0.100	EPA 351.2	KK	03/10/11
Nitrite	< 0.05	mg/l		0.050	EPA 300.0	MO	02/18/11
Nitrate	0.120	mg/l		0.050	EPA 300.0	MO	02/18/11
Total Phosphorus	0.682	mg/l		0.005	SM 4500-PE	KK	03/06/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	12.3	mg/l		0.005	EPA 200.7	HL	02/25/11
Manganese	6.98	mg/l		0.0005	EPA 200.7	HL	02/25/11

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	64.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number **11-A002404**
Client Identification **MW25-20110217**
Sampling Date **02/17/11, 12:37**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Hydrogen Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	02/28/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	3.9	mg/l		0.1	EPA 300.0	MO	03/02/11

Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
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Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 11-A002396 to 11-A002404

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
11-A002103	Alkalinity (as CaCO3)	mg/l	430	440	2.3
11-A002400	Alkalinity (as CaCO3)	mg/l	190	180	5.4
11-A002460	Alkalinity (as CaCO3)	mg/l	16.	16.	0.00
11-A002403	Total Nitrogen (TKN)	mg/l	< 0.1	0.160	
11-A002421	Total Phosphorus	mg/l	< 0.005	< 0.005	
11-A002481	Total Phosphorus	mg/l	0.154	0.151	2.0
11-A002500	Total Phosphorus	mg/l	0.075	0.073	2.7
11-A002510	Total Phosphorus	mg/l	< 0.005	< 0.005	
11-A002816	Total Phosphorus	mg/l	< 0.005	< 0.005	
11-A002555	Total Phosphorus	mg/l	1.02	1.00	2.0
11-A003034	Total Phosphorus	mg/l	0.024	0.022	8.7
11-A003110	Total Phosphorus	mg/l	0.008	0.010	22.
11-A002404	Hydrogen Sulfide	mg/l	< 0.1	< 0.1	
11-A002157	Ferrous Iron	mg/l	0.03	0.03	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
11-A002403	Total Nitrogen (TKN)	mg/l	< 0.1	0.466	0.500	93.20 %
11-A002403	Nitrate	mg/l	< 0.05	2.55	2.50	102.00 %
11-A002403	Nitrate	mg/l	< 0.05	2.20	2.50	88.00 %
11-A002403	Nitrite	mg/l	< 0.05	2.20	2.50	88.00 %
11-A002403	Nitrite	mg/l	< 0.05	2.20	2.50	88.00 %
11-A002421	Total Phosphorus	mg/l	< 0.005	0.093	0.100	93.00 %
11-A002481	Total Phosphorus	mg/l	0.154	0.260	0.100	106.00 %
11-A002500	Total Phosphorus	mg/l	0.075	0.179	0.100	104.00 %
11-A002510	Total Phosphorus	mg/l	< 0.005	0.103	0.100	103.00 %
11-A002816	Total Phosphorus	mg/l	< 0.005	0.106	0.100	106.00 %
11-A002555	Total Phosphorus	mg/l	1.02	3.56	2.50	101.60 %
11-A003034	Total Phosphorus	mg/l	0.024	0.129	0.100	105.00 %
11-A003110	Total Phosphorus	mg/l	0.008	0.112	0.100	104.00 %
11-A002402	Ferrous Iron	mg/l	0.08	1.09	1.00	101.00 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Nitrate	mg/l	2.55	2.20	15.
Spike	Nitrite	mg/l	2.20	2.20	0.00

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO3)	mg/l	240	230	95.8 %
Alkalinity (as CaCO3)	mg/l	240	230	95.8 %
Alkalinity (as CaCO3)	mg/l	240	230	95.8 %
Total Nitrogen (TKN)	mg/l	0.500	0.550	110. %
Nitrate	mg/l	1.00	0.963	96.3 %
Nitrate	mg/l	1.00	1.08	108. %
Nitrite	mg/l	1.00	1.05	105. %
Total Phosphorus	mg/l	0.100	0.095	95.0 %
Total Phosphorus	mg/l	0.100	0.110	110. %
Total Phosphorus	mg/l	0.100	0.106	106. %
Total Phosphorus	mg/l	0.100	0.106	106. %
Total Phosphorus	mg/l	0.100	0.099	99.0 %
Total Phosphorus	mg/l	0.100	0.100	100. %
Total Phosphorus	mg/l	0.100	0.096	96.0 %
Hydrogen Sulfide	mg/l	1.0	0.93	93.0 %
Sulfate	mg/l	1.0	1.1	110. %
Sulfate	mg/l	1.0	0.9	90.0 %
Iron	mg/l	4.00	4.12	103. %
Ferrous Iron	mg/l	1.00	0.83	83.0 %
Ferrous Iron	mg/l	1.00	0.83	83.0 %
Manganese	mg/l	0.800	0.817	102. %

BLANKS

ANALYTE	UNITS	RESULT
Total Nitrogen (TKN)	mg/l	< 0.1
Nitrate	mg/l	< 0.05
Nitrate	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Hydrogen Sulfide	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Iron	mg/l	< 0.005
Ferrous Iron	mg/l	< 0.01
Ferrous Iron	mg/l	< 0.01

BLANKS continued....

ANALYTE	UNITS	RESULT
Manganese	mg/l	< 0.0005

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Amtest

PROJECT NAME/NO. 102210

PO # A-871

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Fe2+ Oil and Grease	Total Fe EPH	Nitrite VPH	Nitrate	Sulfate	Alkalinity	Phosphorus	T KN	Dissolved Methane	Total Manganese	Sulfide	Notes
MW25-20110215		2/15/11	1547	W	4						X	X	X	X	X	X	
MW07-20110215		↓	1755		5					X							
MW12-20110216		2/16/11	0956		5												
MW26-20110216			1145		5												
MW13-20110216			1553		7	X	X	X	X								
MW02-20110216			1739		7	X	X	X	X								
MW03-20110217		2/17/11	0914		7	X	X	X	X								
CMW05-20110217			1056		7	X	X	X	X	↓	↓	↓	↓	↓	↓	↓	
MW25 20110217		↓	1237		2					X							

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	2/18/11	11:50AM.
Received by:				
Relinquished by:				
Received by:				

10221O

SAMPLE CHAIN OF CUSTODY ME 02/18/11

V2/BIY

Page # 1 of 1

Send Report To C.Cacek, R.Bixby

Company SoundEarth Strategies

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO. NCR/0598-001

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Sulfate ~~SW8020 or SM4500-SO4~~	Sulfide ~~SW8020 or SM4500-S2~~	Total Manganese ~~EPA 6020A~~	Dissolved Methane ~~VOCs by 8260~~	Total Kjeldahl Nitrogen ~~SVOCs by 8270~~	Phosphorous ~~RCRA-8 Metals~~	Alkalinity	Nitrate+ Nitrites	Total Fe + Fe^{2+}	Notes
MW25-20110215	MW25	9	01	2/15/11	1547	Water	6 (4)		X	X	X	X	X	X			
MW07-20110215	MW07	10	02		1755		7 (5)	X	X	X	X	X	X	X			
MW12-20110216	MW12	10	03	2/16/11	0956		7 (5)	X	X	X	X	X	X	X			
MW26-20110216	MW26	10	04		1145		7 (5)	X	X	X	X	X	X	X			Q per CC
MW13-20110216	MW13	10.5	05		1553		7	X	X	X	X	X	X	X	X	⊗	2/18/11
MW02-20110216	MW02	9	06		1739		7	X	X	X	X	X	X	X	X	⊗	MG
MW03-20110217	MW03	10	07	2/17/11	0914		7	X	X	X	X	X	X	X	X	⊗	
CMW05-20110217	CMW05	10	08		1056		7	X	X	X	X	X	X	X	X	⊗	
MW25-20110217	MW25	9	09		1237		2	X	[redacted]								Run for Sulfate

ADEA-AEC

2/18/11

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mandel	SES	2/18/11	1600
Received by:	Nhan Phan	FeBI	02/18/11	V
Relinquished by:				
Received by:		Samples received at 3 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Groundwater Analytical Results Second Quarter 2011

Friedman & Bruya, Inc. #105250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 2, 2011

Chuck Cacek, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Cacek:

Included are the results from the testing of material submitted on May 19, 2011 from the NCPC_0592_20110519, F&BI 105250 project. There is 1 page included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ryan Bixby
SOU0602R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 19, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies NCPC_0592_20110519, F&BI 105250 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
105250-01	CMW05-20110517
105250-02	MW26-20110517
105250-03	MW13-20110518
105250-04	MW12-20110518
105250-05	MW03-20110518
105250-06	MW07-20110518
105250-07	MW25-20110519
105250-08	MW02-20110519

Samples CMW05-20110517, MW26-20110517, MW13-20110518, MW12-20110518, MW03-20110518, MW07-20110518, MW25-20110519, and MW02-20110519 were sent to Amtest for sulfate, sulfide, total kjedahl nitrogen, phosphorus, alkalinity, ferrous iron, total iron, manganese, nitrate, and nitrite analyses. Samples MW25-20110519, and MW02-20110519 were also submitted to Amtest for nitrate, nitrite, ferrous iron, and total iron analyses.

In addition, the same samples were sent to Fremont Analytical for dissolved methane analysis. The reports are enclosed.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Jun 1 2011
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029

Enclosed please find the analytical data for your 105250 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
CMW05-20110517	Water	11-A007261	MIN, NUT, CONV, MET
MW26-20110517	Water	11-A007262	MIN, NUT, CONV, MET
MW13-20110518	Water	11-A007263	MIN, NUT, CONV, MET
MW12-20110518	Water	11-A007264	MIN, NUT, CONV, MET
MW03-20110518	Water	11-A007265	MIN, NUT, CONV, MET
MW07-20110518	Water	11-A007266	MIN, NUT, CONV, MET
MW25-20110519	Water	11-A007267	MIN, NUT, CONV, MET
MW02-20110519	Water	11-A007268	MIN, NUT, CONV, MET

Your samples were received on Friday, May 20, 2011. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young
Laboratory Manager

Project #: B-137
PO Number: B-137

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Project Name: 105250
Project #: B-137
PO Number: B-137
All results reported on an as received basis.

Date Received: 05/20/11
Date Reported: 6/ 1/11

AMTEST Identification Number **11-A007261**
Client Identification **CMW05-20110517**
Sampling Date **05/17/11, 11:15**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	310	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	19.	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.284	mg/l		0.100	EPA 351.2	KK	05/26/11
Total Phosphorus	0.669	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	3.44	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007262**
Client Identification **MW26-20110517**
Sampling Date **05/17/11, 13:10**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	280	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	13.	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.511	mg/l		0.100	EPA 351.2	KK	05/26/11
Total Phosphorus	0.934	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	4.92	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007263**
Client Identification **MW13-20110518**
Sampling Date **05/18/11, 10:30**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	190	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	8.2	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.273	mg/l		0.100	EPA 351.2	KK	05/26/11
Total Phosphorus	0.237	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	0.706	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007264**
Client Identification **MW12-20110518**
Sampling Date **05/18/11, 12:08**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	360	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	22.	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.279	mg/l		0.100	EPA 351.2	KK	05/26/11
Total Phosphorus	0.060	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	8.24	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007265**
Client Identification **MW03-20110518**
Sampling Date **05/18/11, 13:33**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	240	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	10.	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.325	mg/l		0.100	EPA 351.2	KK	05/26/11
Total Phosphorus	0.699	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	7.71	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007266**
Client Identification **MW07-20110518**
Sampling Date **05/18/11, 14:30**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	290	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	9.6	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.431	mg/l		0.100	EPA 351.2	KK	05/26/11
Total Phosphorus	1.24	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Manganese	5.24	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007267**
Client Identification **MW25-20110519**
Sampling Date **05/19/11, 10:20**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11
Ferrous Iron	1.70	mg/l		0.01	SM 3500	NLN	05/20/11

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	230	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	6.9	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.478	mg/l		0.100	EPA 351.2	KK	05/26/11
Nitrite	< 0.3	mg/l		0.30	EPA 300.0	MO	05/19/11
Nitrate	< 0.3	mg/l		0.30	EPA 300.0	MO	05/19/11
Total Phosphorus	0.350	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	2.48	mg/l		0.005	EPA 200.7	HL	05/24/11
Manganese	9.01	mg/l		0.0005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007268**
Client Identification **MW02-20110519**
Sampling Date **05/19/11, 11:57**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Sulfide	< 0.1	mg/l		0.10	EPA 376.2	NLN	05/24/11
Ferrous Iron	0.06	mg/l		0.01	SM 3500	NLN	05/20/11

Minerals

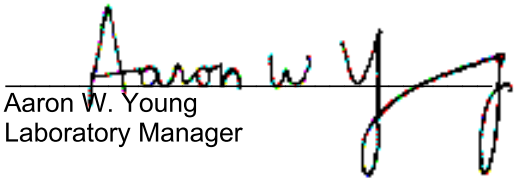
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	160	mg/l		1.0	SM 2320B	PT	05/26/11
Sulfate	< 0.5	mg/l		0.1	EPA 300.0	MO	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Nitrogen (TKN)	0.215	mg/l		0.100	EPA 351.2	KK	05/26/11
Nitrite	< 0.3	mg/l		0.30	EPA 300.0	MO	05/19/11
Nitrate	< 0.3	mg/l		0.30	EPA 300.0	MO	05/19/11
Total Phosphorus	0.051	mg/l		0.005	SM 4500-PE	KK	05/24/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	0.774	mg/l		0.005	EPA 200.7	HL	05/24/11
Manganese	0.801	mg/l		0.0005	EPA 200.7	HL	05/24/11



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 11-A007261 to 11-A007268

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
11-A007160	Alkalinity (as CaCO3)	mg/l	130	130	0.00
11-A007276	Alkalinity (as CaCO3)	mg/l	46.	50.	8.3
11-A007063	Total Nitrogen (TKN)	mg/l	0.244	0.197	21.
11-A007268	Total Nitrogen (TKN)	mg/l	0.215	0.231	7.2
11-A007284	Nitrate	mg/l	1.56	1.50	3.9
11-A007284	Nitrite	mg/l	< 0.3	< 0.3	
11-A006793	Total Phosphorus	mg/l	< 0.005	< 0.005	
11-A007152	Total Phosphorus	mg/l	0.020	0.019	5.1
11-A006880	Total Phosphorus	mg/l	0.175	0.178	1.7
11-A007062	Total Phosphorus	mg/l	0.070	0.065	7.4
11-A007063	Total Phosphorus	mg/l	< 0.005	< 0.005	
11-A007268	Total Sulfide	mg/l	< 0.1	< 0.1	
11-A007237	Sulfate	mg/l	2.5	2.0	22.
11-A007268	Ferrous Iron	mg/l	0.06	0.05	18.

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
11-A007063	Total Nitrogen (TKN)	mg/l	0.244	1.12	1.00	87.60 %
11-A007268	Total Nitrogen (TKN)	mg/l	0.215	1.21	1.00	99.50 %
11-A007284	Nitrate	mg/l	1.56	4.20	3.00	88.00 %
11-A007284	Nitrite	mg/l	< 0.3	2.10	3.00	70.00 %
11-A006793	Total Phosphorus	mg/l	< 0.005	0.205	0.200	102.50 %
11-A007152	Total Phosphorus	mg/l	0.020	0.209	0.200	94.50 %
11-A006880	Total Phosphorus	mg/l	0.175	0.376	0.200	100.50 %
11-A007062	Total Phosphorus	mg/l	0.070	0.266	0.200	98.00 %
11-A007063	Total Phosphorus	mg/l	< 0.005	0.200	0.200	100.00 %
11-A007237	Sulfate	mg/l	2.5	4.6	3.0	70.00 %
11-A007222	Iron	mg/l	24.3	26.1	2.00	90.00 %
11-A007222	Iron	mg/l	24.3	26.0	2.00	85.00 %
11-A007267	Ferrous Iron	mg/l	1.70	11.4	10.0	97.00 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Iron	mg/l	26.1	26.0	0.38

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO3)	mg/l	240	240	100. %
Alkalinity (as CaCO3)	mg/l	240	240	100. %
Alkalinity (as CaCO3)	mg/l	240	230	95.8 %
Total Nitrogen (TKN)	mg/l	0.500	0.498	99.6 %
Total Nitrogen (TKN)	mg/l	0.500	0.490	98.0 %
Nitrate	mg/l	2.00	2.02	101. %
Nitrate	mg/l	1.25	1.38	110. %
Nitrite	mg/l	2.00	2.10	105. %
Nitrite	mg/l	1.25	1.38	110. %
Total Phosphorus	mg/l	0.200	0.194	97.0 %
Total Phosphorus	mg/l	0.200	0.199	99.5 %
Total Phosphorus	mg/l	0.200	0.199	99.5 %
Total Phosphorus	mg/l	0.200	0.199	99.5 %
Total Sulfide	mg/l	1.0	0.99	99.0 %
Sulfate	mg/l	2.0	2.0	100. %
Sulfate	mg/l	1.2	1.3	108. %
Iron	mg/l	4.00	3.96	99.0 %
Ferrous Iron	mg/l	1.00	0.86	86.0 %
Manganese	mg/l	0.800	0.818	102. %

BLANKS

ANALYTE	UNITS	RESULT
Total Nitrogen (TKN)	mg/l	< 0.1
Total Nitrogen (TKN)	mg/l	< 0.1
Nitrate	mg/l	< 0.05
Nitrate	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Phosphorus	mg/l	< 0.005
Total Sulfide	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Iron	mg/l	< 0.005
Ferrous Iron	mg/l	< 0.01
Manganese	mg/l	< 0.0005

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl
Company Friedman and Bruya, Inc.
Address 3012 16th Ave W
City, State, ZIP Seattle, WA 98119
Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER: Antest
PROJECT NAME/NO.: 105250
PO #: B-137
REMARKS: Please Email Results merdahl@friedmanandbruya.com

Page # 1 of 1

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

	Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	Total Mn EPH	Nitrite VPH	Nitrate	Sulfate	Alkalinity	Sulfide	TKN	Phosphorus	Total Fe and Fe2+	Notes
7261	CMW05-20110517		5/17/11	1115	W			x			x	x	x	x	x		
62	MW26-20110517		↓	1310	↓			↓			↓	↓	↓	↓	↓		
63	MW13-20110518		5/18/11	1030													
64	MW12-20110518			1208													
65	MW03-20110518			1333													
66	MW07-20110518			1430													
67	MW25-20110519		5/19/11	1020					x	x						x	
68	MW02-20110519		↓	1157	↓			↓	x	x	↓	↓	↓	↓	↓	x	
	T 15.0																

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	5/19/11	9:00AM.
Received by:		~~Anne~~ L Lake	Antest	5/20/11	11:15
Relinquished by:					
Received by:					

2930 Westlake Ave N Suite 100
Seattle, WA 98109
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, Washington 98119

RE: 105250
Lab ID: 1105100

May 26, 2011

Attention Michael Erdahl:

Fremont Analytical, Inc. received 8 sample(s) on 5/20/2011 for the analyses presented in the following report.

Dissolved Gases by RSK-175

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Date: *05/26/2011*

CLIENT: Friedman & Bruya
Project: 105250
Lab Order: 1105100

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1105100-001	CMW05-20110517	05/17/2011 11:15 AM	05/20/2011 1:25 PM
1105100-002	MW26-20110517	05/17/2011 1:10 PM	05/20/2011 1:25 PM
1105100-003	MW13-20110518	05/18/2011 10:30 AM	05/20/2011 1:25 PM
1105100-004	MW12-20110518	05/18/2011 12:08 PM	05/20/2011 1:25 PM
1105100-005	MW03-20110518	05/18/2011 1:33 PM	05/20/2011 1:25 PM
1105100-006	MW07-20110518	05/18/2011 2:30 PM	05/20/2011 1:25 PM
1105100-007	MW25-20110519	05/19/2011 10:20 AM	05/20/2011 1:25 PM
1105100-008	MW02-20110519	05/19/2011 11:57 AM	05/20/2011 1:25 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1105100**
Date: **5/26/2011**

CLIENT: Friedman & Bruya
Project: 105250

I. SAMPLE RECEIPT:
All samples were received intact.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/17/2011 11:15:00 AM
Project: 105250
Lab ID: 1105100-001
Matrix: Groundwater
Client Sample ID: CMW05-20110517

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	0.00842	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/17/2011 1:10:00 PM
Project: 105250
Lab ID: 1105100-002
Matrix: Groundwater
Client Sample ID: MW26-20110517

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	0.0440	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/18/2011 10:30:00 AM
Project: 105250
Lab ID: 1105100-003
Matrix: Groundwater
Client Sample ID: **MW13-20110518**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	0.0305	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/18/2011 12:08:00 PM
Project: 105250
Lab ID: 1105100-004
Matrix: Groundwater
Client Sample ID: MW12-20110518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	ND	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/18/2011 1:33:00 PM
Project: 105250
Lab ID: 1105100-005
Matrix: Groundwater
Client Sample ID: **MW03-20110518**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	0.0310	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/18/2011 2:30:00 PM
Project: 105250
Lab ID: 1105100-006
Matrix: Groundwater
Client Sample ID: MW07-20110518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	0.0320	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/19/2011 10:20:00 AM
Project: 105250
Lab ID: 1105100-007
Matrix: Groundwater
Client Sample ID: MW25-20110519

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	0.0827	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1105100**
Date Reported: **5/26/2011**

Client: Friedman & Bruya
Collection Date: 5/19/2011 11:57:00 AM
Project: 105250
Lab ID: 1105100-008
Matrix: Groundwater
Client Sample ID: MW02-20110519

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175						Analyst: **MD**
Methane	ND	0.00500		mg/L	1	5/24/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *5/26/2011*

Work Order: 1105100
CLIENT: Friedman & Bruya
Project: 105250

QC SUMMARY REPORT

Dissolved Gases by RSK-175

Sample ID: **MBLK-100**	SampType: **MBLK**	Units: **mg/L**	Prep Date: **5/24/2011**	RunNo: **984**
Client ID: **MBLKW**	Batch ID: **R984**		Analysis Date: **5/24/2011**	SeqNo: **19645**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	ND	0.00500									

Sample ID: **LCS 100**	SampType: **LCS**	Units: **µg/L**	Prep Date: **5/24/2011**	RunNo: **984**
Client ID: **LCSW**	Batch ID: **R984**		Analysis Date: **5/24/2011**	SeqNo: **19647**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	116	0.00500	100.0	0	116	80	120				

Sample ID: **1105100-001ADUP**	SampType: **DUP**	Units: **mg/L**	Prep Date: **5/24/2011**	RunNo: **984**
Client ID: **CMW05-20110517**	Batch ID: **R984**		Analysis Date: **5/24/2011**	SeqNo: **19650**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	0.00950	0.00500						0.008420	12.1	30	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

1105 100

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl
Company Friedman and Bruya, Inc.
Address 3012 16th Ave W
City, State, ZIP Seattle, WA 98119
Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Fremont
PROJECT NAME/NO. 105250
PO # A-998
REMARKS
Please Email Results
merdahl@friedmanandbruya.com

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	Dissolved Methane				Notes
CMW05-20110517		5/17/11	1115	W								x				
MW16-20110517		↓	1310													
MW13-20110518		5/18/11	1030													
MW12-20110518			1208													
MW03-20110518			1335													
MW07-20110518			1430													
MW25-20110519		5/19/11	1020													
MW12-20110519		↓	1157	↓												

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	5/19/11	9:00AM
Received by:		M. ROSEMAN	FAI	5/20/11	1325
Relinquished by:					
Received by:					

105250

SAMPLE CHAIN OF CUSTODY

ME 05/19/11 V2/BIY

Page # 1 of 1

Send Report To C. Cacek, R. Bixby

Company SoundEarth Strategies

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: ColFax / 0592

PO #:

REMARKS: * Monitored Natural Attenuation = Sulfate, Sulfide, [redacted], Dissolved Methane, Total K-N, Nitrogen, Phosphorus, Alkalinity, and Total Manganese

GEMS Y / N

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Monitored Natural Attenuation *	Nitrates, Nitrites, Fe 2+, Total Fe	Notes
CMW05-20110517	CMW05	10	01 A E	5/17/11	1115	H2O	5							X		* See Remarks
MW26-20110517	MW26	10	02	5/17/11	1310	H2O	5							X		
MW13-20110518	MW13	10	03	5/18/11	1030	H2O	5							X		
MW12-20110518	MW12	10	04	5/18/11	1208	H2O	5							X		
MW03-20110518	MW03	9	05	5/18/11	1333	H2O	5							X		
MW07-20110518	MW07	10	06	5/18/11	1430	H2O	5							X		
MW25-20110519	MW25	9	07 A F	5/19/11	1020	H2O	6							X	X	
MW02-20110519	MW02	13	08 A F	5/19/11	1157	H2O	6							X	X	

5/19/11

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mendel	SES	5/19/11	1810
Received by:	Kurt Johnson	F&B	5/19/11	1810
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Samples received at 4 °C

Friedman & Bruya, Inc. #105216

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 6, 2011

Chuck Cacek, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Cacek:

Included are the results from the testing of material submitted on May 18, 2011 from the NCPC_0592_20110518, F&BI 105216 project. There is 1 page included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ryan Bixby
SOU0606R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 18, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies NCPC_0592_20110518, F&BI 105216project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
105216-01	CMW05-20110517
105216-02	MW26-20110517

The samples were sent to Amtest for nitrate, nitrite, total iron, and ferrous iron analyses. The report is enclosed.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project Name: 105216
Project #: B-121
PO Number: B-121
All results reported on an as received basis.

Date Received: 05/18/11
Date Reported: 6/ 3/11

AMTEST Identification Number **11-A007071**
Client Identification **CMW05-20110517**
Sampling Date **05/17/11, 11:15**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	5.26	mg/l		0.01	SM 3500	KF	05/18/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.3	mg/l		0.050	EPA 300.0	MO	05/27/11
Nitrate	0.312	mg/l		0.050	EPA 300.0	MO	05/27/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	7.56	mg/l		0.005	EPA 200.7	HL	05/20/11

AMTEST Identification Number **11-A007072**
Client Identification **MW26-20110517**
Sampling Date **05/17/11, 13:10**

Conventionals

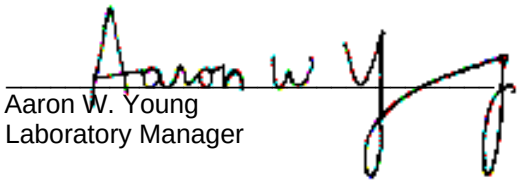
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	7.68	mg/l		0.01	SM 3500	KF	05/18/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.3	mg/l		0.050	EPA 300.0	MO	05/27/11
Nitrate	< 0.3	mg/l		0.050	EPA 300.0	MO	05/27/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	17.8	mg/l		0.005	EPA 200.7	HL	05/20/11



Aaron W. Young
Laboratory Manager

105216

SAMPLE CHAIN OF CUSTODY

ME 05/18/11

BIY

Page # 1 of 1

Send Report To C. Cacek

Company SoundEarth Strategies

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO. Colfax / 0592

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Nitrates + Nitrites	Total Fe & Ferrous Fe	Notes
CMW05-20110517	CMW05	10	01	5/17/11	1115	H20	1							X	X	
MW26-20110517	MW26	10	02	5/17/11	1310	H20	1							X	X	

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mandel	SES	5/17/11	1445
Received by:	Nhan Phan	FedEx	5/18/11	0905
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Samples received at 2 °C

Friedman & Bruya, Inc. #105237

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 6, 2011

Chuck Cacek, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Cacek:

Included are the results from the testing of material submitted on May 19, 2011 from the NCPC_0592_20110519, F&BI 105237 project. There is 1 page included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ryan Bixby
SOU0606R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 19, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies NCPC_0592_20110519, F&BI 105237 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
105237-01	MW13-20110518
105237-02	MW12-20110518
105237-03	MW03-20110518
105237-04	MW07-20110518

The samples were sent to Amtest for nitrate, nitrite, total iron, and ferrous iron analyses. The report is enclosed.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project Name: 105237
PO Number: B-121
All results reported on an as received basis.

Date Received: 05/19/11
Date Reported: 6/ 3/11

AMTEST Identification Number **11-A007219**
Client Identification **MW13-20110518**
Sampling Date **05/18/11, 10:30**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.34	mg/l		0.01	SM 3500	NLN	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.3	mg/l		0.050	EPA 300.0	MO	06/03/11
Nitrate	2.10	mg/l		0.050	EPA 300.0	MO	06/03/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	3.68	mg/l		0.005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007220**
Client Identification **MW12-20110518**
Sampling Date **05/18/11, 12:08**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	1.28	mg/l		0.01	SM 3500	NLN	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.3	mg/l		0.050	EPA 300.0	MO	06/03/11
Nitrate	0.630	mg/l		0.050	EPA 300.0	MO	06/03/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	3.02	mg/l		0.005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007221**
Client Identification **MW03-20110518**
Sampling Date **05/18/11, 13:33**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	6.12	mg/l		0.01	SM 3500	NLN	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.3	mg/l		0.050	EPA 300.0	MO	06/03/11
Nitrate	0.390	mg/l		0.050	EPA 300.0	MO	06/03/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	13.5	mg/l		0.005	EPA 200.7	HL	05/24/11

AMTEST Identification Number **11-A007222**
Client Identification **MW07-20110518**
Sampling Date **05/18/11, 14:30**

Conventionals

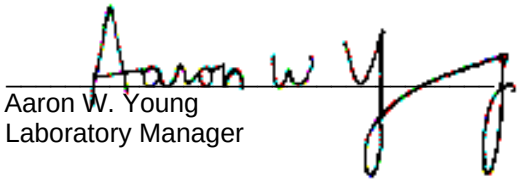
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	9.92	mg/l		0.01	SM 3500	NLN	05/19/11

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.3	mg/l		0.050	EPA 300.0	MO	06/03/11
Nitrate	0.558	mg/l		0.050	EPA 300.0	MO	06/03/11

ICP Metals by EPA Method 200.7

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	24.3	mg/l		0.005	EPA 200.7	HL	05/24/11



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 11-A007219 to 11-A007222

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
11-A007576	Nitrate	mg/l	0.438	0.400	9.1
11-A007576	Nitrite	mg/l	< 0.3	< 0.3	
11-A007222	Ferrous Iron	mg/l	9.92	9.92	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
11-A007576	Nitrate	mg/l	0.438	1.90	1.50	97.47 %
11-A007576	Nitrite	mg/l	< 0.3	1.86	1.50	124.00 %
11-A007222	Iron	mg/l	24.3	26.1	2.00	90.00 %
11-A007222	Iron	mg/l	24.3	26.0	2.00	85.00 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Iron	mg/l	26.1	26.0	0.38

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	1.00	0.984	98.4 %
Nitrate	mg/l	1.00	1.09	109. %
Nitrite	mg/l	1.00	1.06	106. %
Nitrite	mg/l	1.00	0.910	91.0 %
Iron	mg/l	4.00	3.96	99.0 %
Ferrous Iron	mg/l	1.00	0.84	84.0 %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.05
Nitrate	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Iron	mg/l	< 0.005
Ferrous Iron	mg/l	< 0.01

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 11-A007071 to 11-A007072

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
11-A007533	Nitrate	mg/l	1.44	1.56	8.0
11-A007533	Nitrite	mg/l	< 0.3	< 0.3	
11-A007071	Ferrous Iron	mg/l	5.26	5.05	4.1

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
11-A007533	Nitrate	mg/l	1.44	3.66	2.50	88.80 %
11-A007533	Nitrite	mg/l	< 0.3	2.27	2.50	90.80 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	1.00	1.09	109. %
Nitrite	mg/l	1.00	1.08	108. %
Iron	mg/l	4.00	4.00	100. %
Ferrous Iron	mg/l	1.25	1.29	103. %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.05
Nitrite	mg/l	< 0.05
Iron	mg/l	< 0.005
Ferrous Iron	mg/l	< 0.01

105237

SAMPLE CHAIN OF CUSTODY

ME 05/19/11

CD4

Page # 1 of 1

Send Report To C. Cacek

Company SoundEarth Strategies

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO. Colfax / 0592

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Nitrate + Nitrite	Fe2+ and Total Fe	Notes
MW13-20110518	MW13	10	01	5/18/11	1030	H2O	1							X	X	
MW12-20110518	MW12	10	02	5/18/11	1208	H2O	1							X	X	
MW03-20110518	MW03	9	03	5/18/11	1333	H2O	1							X	X	
MW07-20110518	MW07	10	04	5/18/11	1430	H2O	1							X	X	

5/18/11

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mandel	SES	5/18/11	1500
Received by:	Nhan Phan	FeBI	5/19/11	0900
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 2 °C