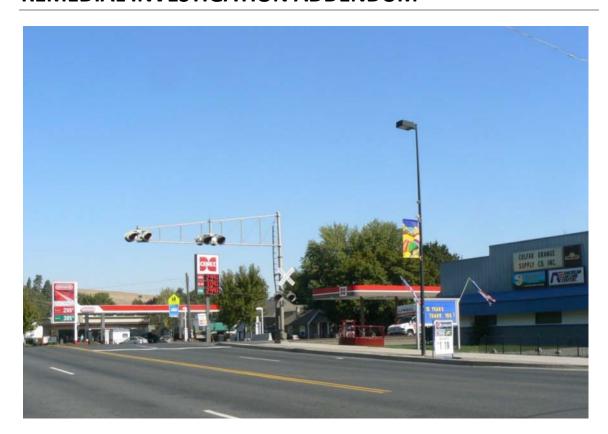
### **REMEDIAL INVESTIGATION ADDENDUM**



### Site:

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

### **Report Date:**

March 16, 2012

### **Prepared for:**

The North Colfax Group

### **Remedial Investigation Addendum**

Prepared for:

### The North Colfax Group

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

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March 16, 2012





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Am Test Inc. #008234

Aquatic Research Incorporated #FBI007-04

Anatek Labs, Inc. #100819018

Groundwater Analytical Results Fourth Quarter 2010

Friedman & Bruya, Inc. #011250

Aquatic Research Incorporated #FBI007-37

Fremont Analytical #CHEM101122-1

Groundwater Analytical Results First Quarter 2011

Friedman & Bruya, Inc. #102185

Friedman & Bruya, Inc. #102210

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Friedman & Bruya, Inc. #105237

### **Remedial Investigation Addendum**

### **ACRONYMS AND ABBREVIATIONS**

μg/L micrograms per liter

bgs below ground surface

BOD biochemical oxygen demand

COD chemical oxygen demand

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 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.

### **EXECUTIVE SUMMARY (CONTINUED)**

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

### **EXECUTIVE SUMMARY (CONTINUED)**

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<sup>+2</sup> 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<sup>+2</sup> is calculated by analyzing both unfiltered and field filtered samples for total manganese; the difference of the results is considered representative of manganese<sup>+2</sup> 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<sup>+4</sup> and the concentration of manganese<sup>+2</sup> 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-fitline.

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

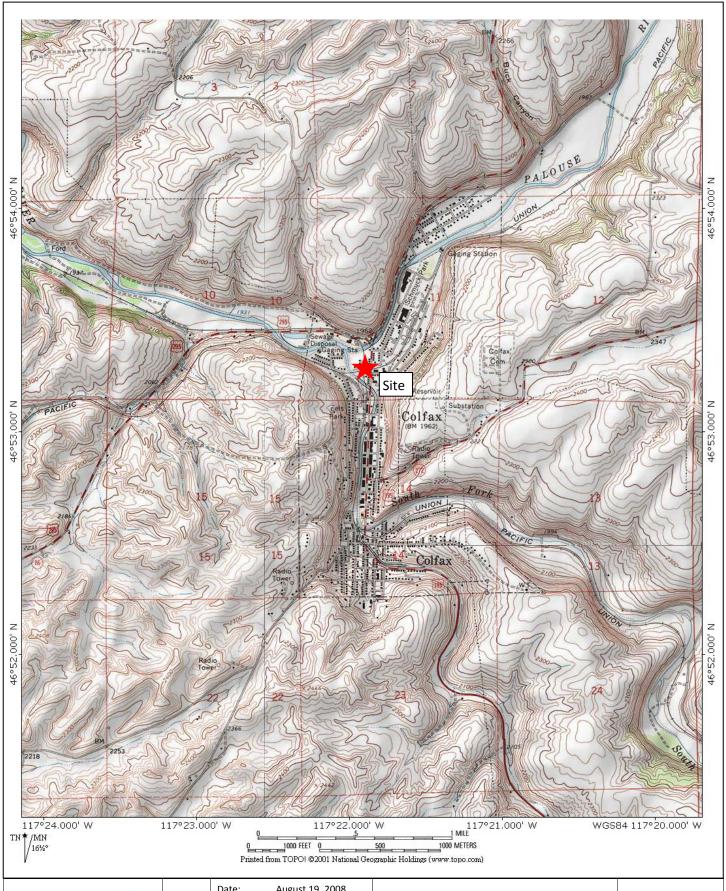
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### 7.0 LIMITATIONS

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, Inc.







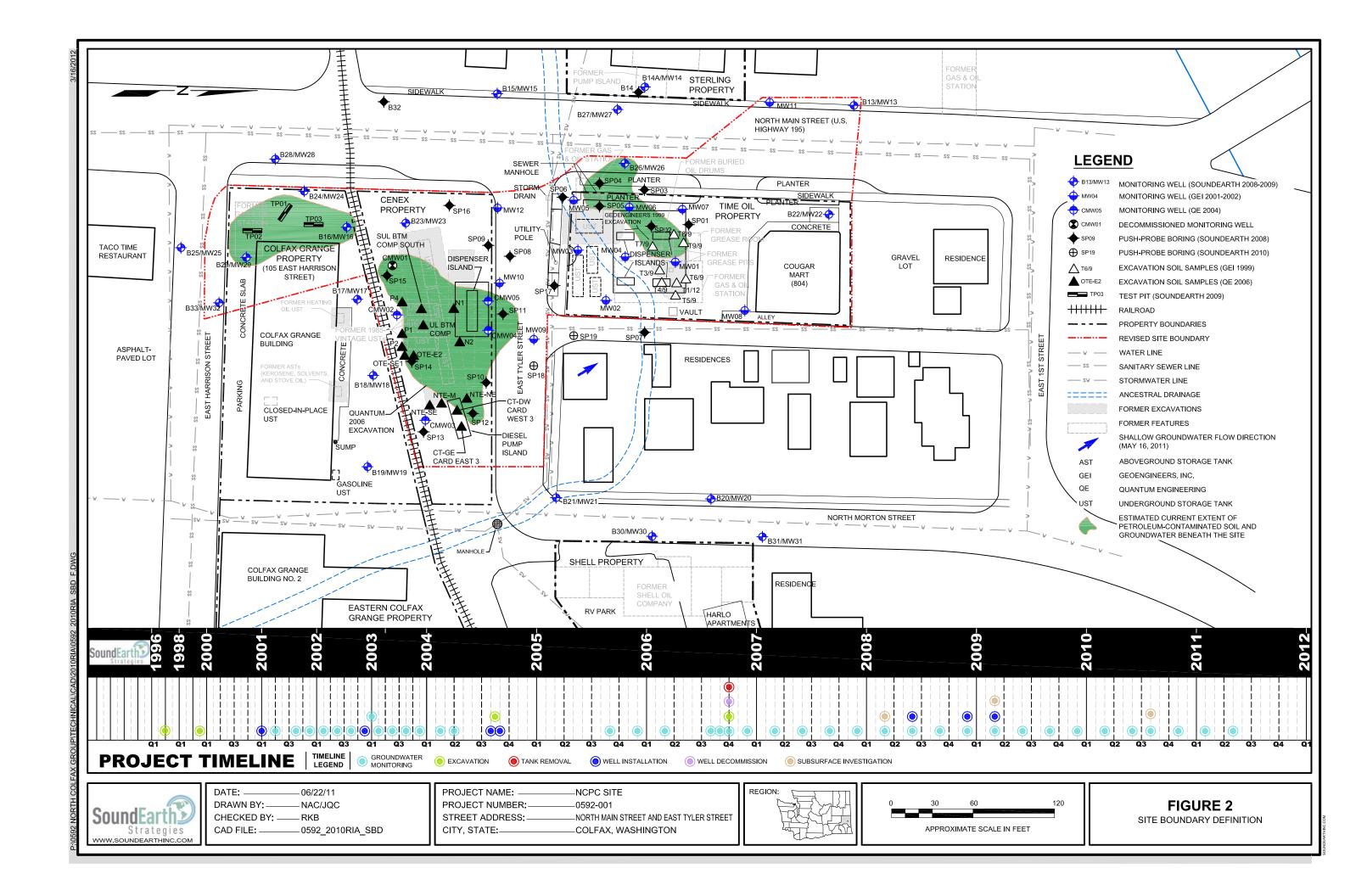
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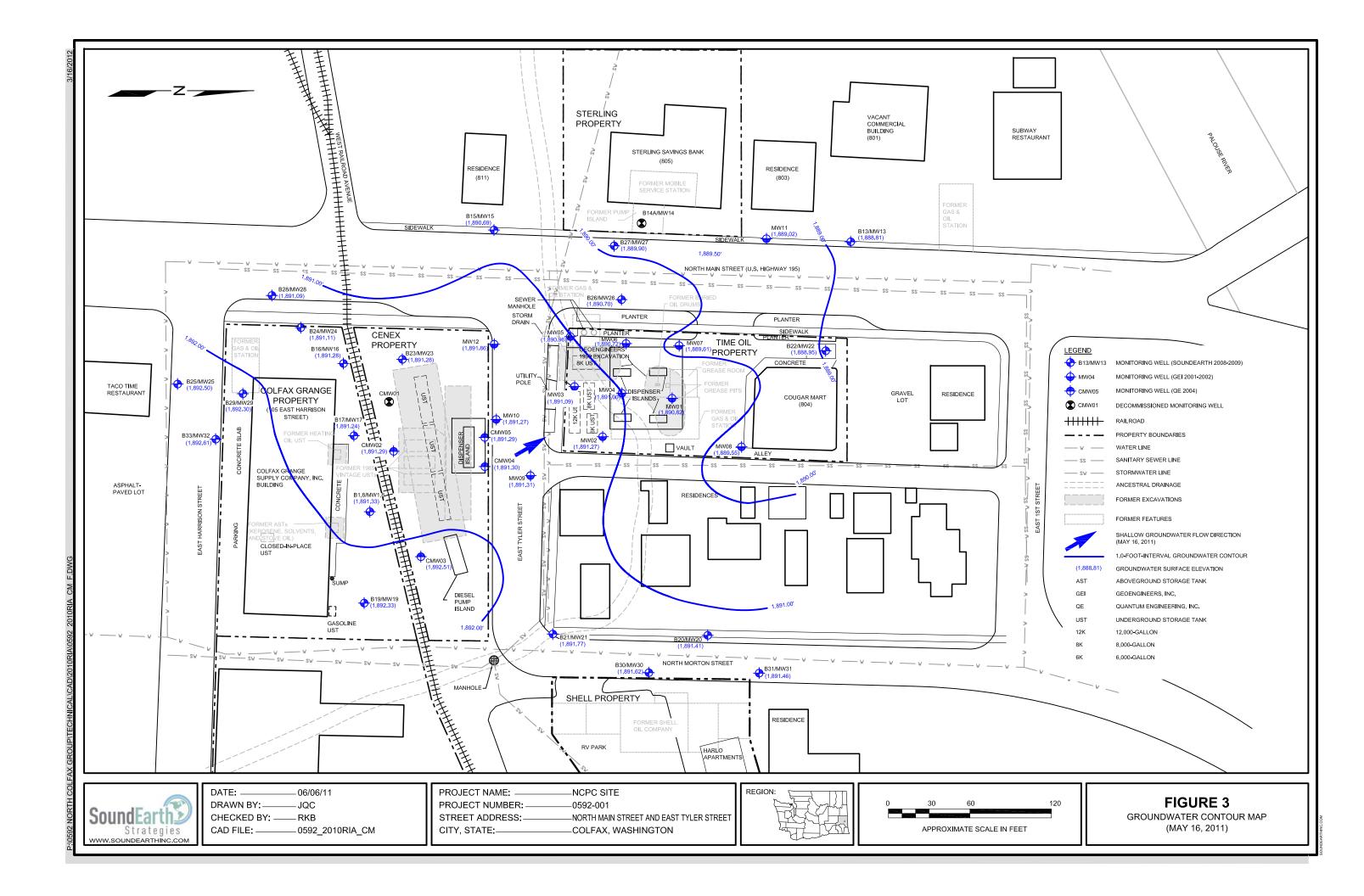
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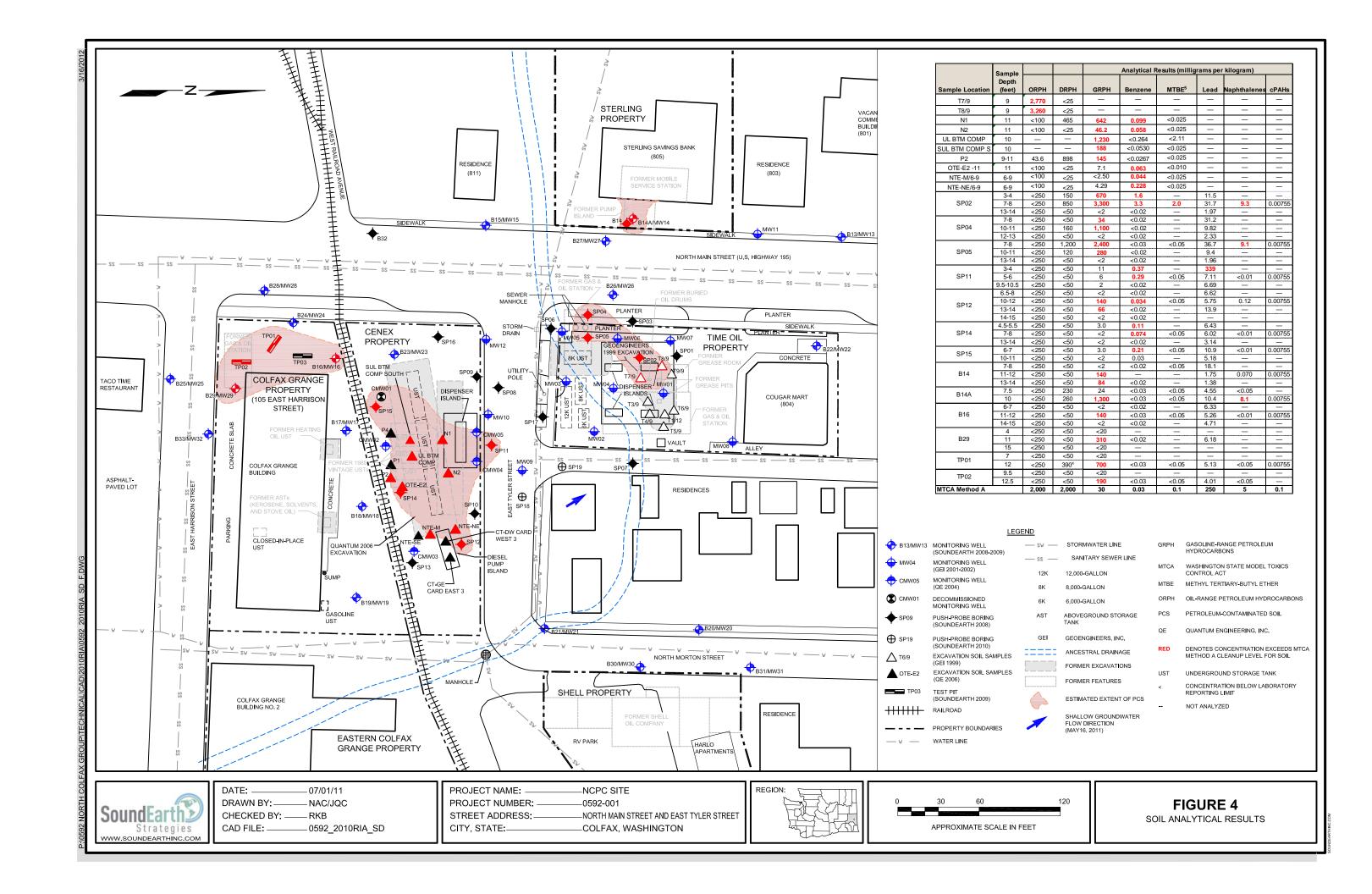
North Colfax Petroleum Contamination Site
North Main Street and
East Tyler Street
Colfax, Washington

## FIGURE 1

Site Location Map







# **TABLES**

SoundEarth Strategies, Inc.



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

				Analytical Results <sup>1</sup> (mg/kg)				
Sample Location	Sample ID	Date Sampled	<b>Depth</b> (feet bgs)	GRPH	DRPH	ORPH		
SP18	SP18-4-5	08/16/10	4-5	<20	<50	<250		
31 10	SP18-9-10	08/16/10	9-10	<20	<50	<250		
SP19	SP19-3-4	08/16/10	3-4	<20	<50	<250		
3719	SP19-7-8	08/16/10	7-8	<20	<50	<250		
MTCA Method	A Soil Cleanup Leve	2		100/30 <sup>a</sup>	2,000	2,000		

### NOTES:

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

<sup>a</sup>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

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 $<sup>^{1}\!\</sup>text{Analyzed}$  by Northwest Total Petroleum Hydrocarbon Method Method HCID.

<sup>&</sup>lt;sup>2</sup>MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.



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

					Total Dissolved				Dissolved	Specific
			Nitrite <sup>2</sup>	Fecal Coliform <sup>3</sup>	Solids <sup>4</sup>	COD⁵	BOD <sup>6</sup>		Oxygen <sup>7</sup>	Conductivity <sup>7</sup>
Well ID	Date Collected	Nitrate <sup>1</sup> (mg/L)	(mg/L)	(MPN/100 mL)	(mg/L)	(mg/L)	(mg/L)	pH <sup>7</sup>	(mg/L)	(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
<b>EPA National Drinking</b>	Water Regulations <sup>8</sup>	10 <sup>a</sup>	<b>1</b> <sup>a</sup>	0 <sup>a</sup>	500 <sup>b</sup>	NE	NE	6.5-8.5 <sup>b</sup>	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.

<sup>1</sup>Analyzed by Method SM 184500N03F.

<sup>2</sup>Analyzed by EPA 353.2.

<sup>3</sup>Analyzed by Method SM 9221E.

<sup>4</sup>Analyzed by Method SM 18 2540C.

<sup>5</sup>Analyzed by Method SM 18 5220D.

<sup>6</sup>Analyzed by Method SM 5210B.

<sup>7</sup>Values obtained using a Horiba or YSI water quality meter.

<sup>a</sup>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.

<sup>b</sup>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

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

		Analytical Results Groundwater Quality Parameters <sup>13</sup>										·s <sup>13</sup>					
		Sulfate <sup>1</sup>	Sulfide <sup>2</sup>	Total Iron <sup>3</sup>	Ferrous Iron <sup>4</sup>	Ferric Iron <sup>5</sup>	Manganese <sup>6</sup>	Nitrate <sup>7</sup>	Nitrite <sup>8</sup>	TKN <sup>9</sup>	Total Phosphorous <sup>10</sup>	Alkalinity <sup>11</sup>	Dissolved Methane <sup>12</sup>		Specific Conductivity	Dissolved Oxygen	ORP
Well ID	Date Collected	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg CaCO <sub>3</sub> /L)	(mg/L)	рН	(μs/cm)	(mg/L)	(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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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.

- -- 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<sub>3</sub>/L= milligrams of calcium carbonate per liter

mV = millivolts

ORP = oxidation-reduction potential

SM = standard method

SoundEarth = SoundEarth Strategies, Inc.

TKN = total Kjeldahl nitrogen

<sup>&</sup>lt;sup>1</sup>Analyzed by Method SM184500SO4E.

<sup>&</sup>lt;sup>2</sup>Analyzed by EPA Method 376.1 or EPA 300.0.

<sup>&</sup>lt;sup>3</sup>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.

<sup>&</sup>lt;sup>4</sup>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.

<sup>&</sup>lt;sup>5</sup>Ferric iron = Total iron–Ferrous iron.

<sup>&</sup>lt;sup>6</sup>Analyzed by EPA Method 200.7 or 200.8.

<sup>&</sup>lt;sup>7</sup>Analyzed by Method SM184500N03F or EPA 300.0.

<sup>&</sup>lt;sup>8</sup>Analyzed by EPA Method 353.2 or 300.0.

<sup>&</sup>lt;sup>9</sup>Analyzed by EPA Method 351.1 or 351.2.

<sup>&</sup>lt;sup>10</sup>Analyzed by EPA Method 365.1 or SM 4500-PE.

<sup>&</sup>lt;sup>11</sup>Analyzed by Method SM18 2320B.

<sup>&</sup>lt;sup>12</sup>Analyzed by EPA Method RSK-175.

 $<sup>^{13}</sup>$ Parameter measured in the field by SoundEarth personnel using down-hole water quality meter.

<sup>&</sup>lt;sup>14</sup>Analyzed by Method SM18 2540C.

<sup>&</sup>lt;sup>15</sup>Analyzed by Method SM18 5220D.

<sup>&</sup>lt;sup>16</sup>Analyzed by Method SM18 5210B.

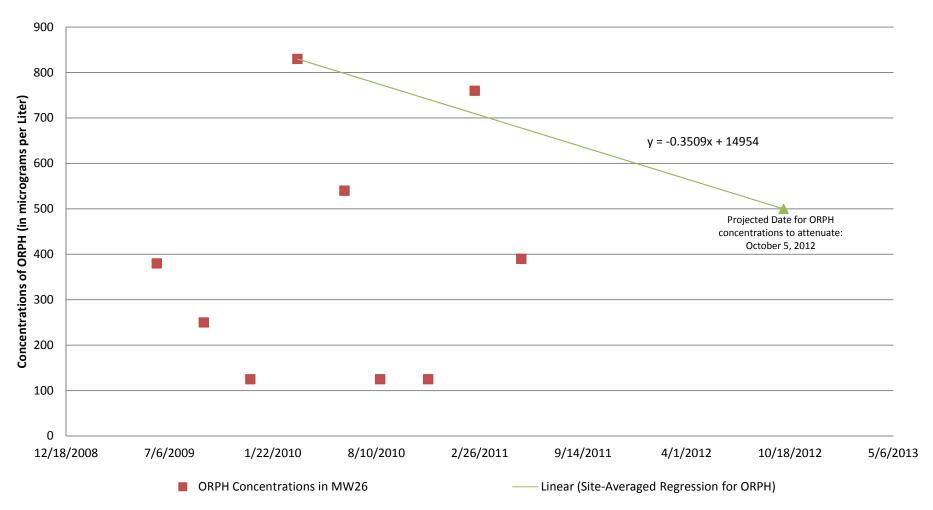
<sup>&</sup>lt;sup>a</sup>Concentration reported as hydrogen sulfide.

# **CHART** SoundEarth Strategies, Inc.



# 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



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 | SP18 LOG |

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

				Da	ite Completeu.	0/10/	2010	Aπer Completion	
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.	
5—			<u>-</u> 66	1.7	SP18-4-5 SP18-6-7	ML		Damp, SILT, with trace fine sand, dark brown, no hydrocarbon odor (95-5-0).	
10 —	<u></u>		60	0.2	SP18-9-10	SP		Wet, silty fine to coarse SAND, brown, no hydrocarbon odor (15-85-0).	
			150	1.1	SP18-12-13	GP		Wet, GRAVEL, with coarse sand, gray- brown/black, no hydrocarbon odor (0-10-90).	
- 15								Refusal at 13' bgs. Boring backfilled with ~1/2 bag of hydrated bentonite chips.	
Drillin Drillin Sampl Hamm Total I Total V	g Equ ler Ty ler Ty Borin Well [	pe: pe/We g Dept Depth:	it: Pi  ight: h: 13	3	We Scr Ibs Filtr feet bgs Sur feet bgs Ann	II/Auger D II Screene een Slot S er Pack Us face Seals nular Seals	d Interval: Size: sed: :	inches feet bgs inches inches	Page: 1 of 1



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 | SP19 LOG |

Site Address: North Main St & East Tyler St

Colfax, Washington

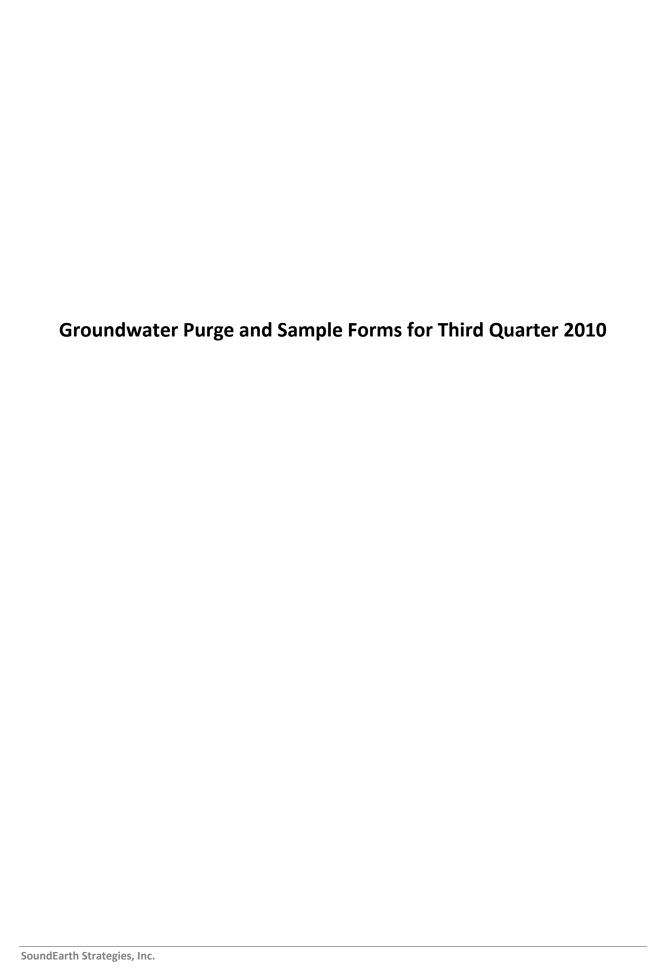
Water Depth At Time of Drilling

8 feet bgs

_		Ū
Water Depth After Completion	9	feet bgs

						0/10/		- Aitel Completion	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic		Well onstruction Detail
0 -						FILL		FILL: Asphalt/sand/silt mottled black/brown/red, no hydrocarbon odor.	
_			40	2.6	SP19-3-4	ML		Damp to moist, SILT, with fine sand, brown to dark brown, no hydrocarbon odor (85-15-0).	
5—			88	1.9	SP19-5-6				
-				1.8	SP19-7-8	ML		Moist to wet, SILT, with fine sand, brown, no hydrocarbon odor (80-20-0).	
	Ĭ.		66	 				Gradational: Moist to wet, gravelly SILT,	
10 —				3.9	SP19-10-11	GM GP		brown/gray mottled, no hydrocarbon odor (55-10- 35).  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						ell/Auger D	iameter:	inches Notes/Comments:	
Drillin	g Eq	uipmer		ush-Probe	W	ell Screene	d Interval	ilicites	
Samp	ler T	ype:				creen Slot S		inches	
		ype/We ig Dept				Iter Pack Usurface Seals			
1		ig Depi Depth:			· ·	nnular Seal		F	Page:
		ID No.:				onument Ty	ype:	-   i	of 1
					l l			1	

# APPENDIX B GROUNDWATER PURGE AND SAMPLE FORMS



	LATEGIES										
Client:	nvironmental.com	. Dro	vioot #	. 0	592-001						
Site:	(Fax			20	5 04 00	_			AAX.13	10	
6397.000.000.000	ng Personnel: DA		₽ #. <u>_</u>			-	Well IL	) Number	10/10	1 0/	
rieia/sampiii	ng Personnel:	a;tera (				_					
	- 1										
Total Depth	and the second second	Company of expression	10000000		Casing Diame	eter (inches	)	Casing	Volume	Tof	tal Purge
	(Prior To Purging)	(TD - DTW)		1	(2)	4	6	(WC	X CD)		/olume
153	8,88			0.04	1 0.16	0.64	1.44			~	36
Water Qualit	y Meter: Type \\	= 556 + TurbielA	ne)25				D-1-	of Sampling	8/18	-110	)
	ethod: Peristaltic						Date	of Sampling	: 0/10	VIC	
	ling Method: Low F	lòw Other:					Time	of Sampling	140	8	
Screened Int	erval: 5-15			S	Sampling Depth (d	approx. the	center of	f saturated s	screen):	121	
Time Start Pu	rge: 1349				Time End Purge	: 143	9			10	
Time	Water Level	Rate of Purging			Specific		Dissolv	ed Oxygen			
(3-5 min intervals)	(drawdown <0.33') WL Meter) or Bubbler	(Liter/min) 0.1 – 0.5	рН	± 0.1	Conductivity	Turbidity (NTU)		(mg/L) 10% or	Tempera		ORP
I morrais)					(UNITS)	(110)		mg/L, ± 0.2	(°C) ± 3	3%	(mV)
1353	8,91	0.18	6.	56	1,023	1.16	0.	83	19.51		79.6
1356	8.91	0.18	6.	18	1.012	23.8	0.	39	19.16		81.6
1359	8.91	0.18	6,	59	0,983	21,6	O.	38	18.8	3	77.1
1402	8.91	0.18	6.1		0.974	19.5		27	18.6	3	74.1
1405	891	018	6,	67	0.971	15.2	0.	<i>a</i> 5	18,5		57,2
				_	DM .						
-											
Sampling Co	I mments:									_	
Sampl	e Number/ID	Contai	ner Typ	oe e	Preservative	Field Filt	ered?	A	nalysis Red	quest	
MW19-	20100818	1×38041	AG	B		No 0.45	5 0.10	N.A. B	Potabili	In	
		IXIL A	KGB	)		No 0.45	5 0.10		1	-)-	
	) on	3x 300ml		4	H250H	No 0.45	0.10		1		
	5	4 x 500,	11 8	14		(No) 0.45	0.10		V		
PURGE WATER	R DISPOSAL NOTES:			)							
	ge (1Gal=3.8785Ltr):	~1/2	Dispo	osal Me	ethod: Drumme	Reme	ed. Syster	n Other:			- 11-2
Woll /Cit - O	dition Information:										
1.5	Devices in good co	ndition? (i.e. M	און וחכ	ant Pal	te Soale Loan La	ook)			Voc	(	
	er Infiltration (if yes, c		Ji luli le	i II, DUI		ES ⇒		-	Yes	\A.L.	U Carina
	(e.g.: repair of any	(***)	comn	onents				UVIOI	nument Yes		Il Casing
	ell Condition Comm								103		100
	3	1	1/3								
	The second	11									-
general terror to the second terror	#2000 CASTOLING	A 1969 CONTRACTOR OF THE PARTY	Section 19								

- 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**

www.sound Client:N	fenvironmental.com	Dro	ioot#: 05	92-001						
Site:	OLGX	PIO Site	geci#: <u>U a</u>	92-001	-	VAV. II ID	Number	Mill	IK	
	oling Personnel:	Masla	J #	2. 6. 0. 0.	-	Well ID	Number	1 100	30	_
rieia/samp	oling Personner.	a revery			_					
Total Dept			1000	Casing Diame	eter (inches)			Volume		al Purge
	(Prior To Purging)	(TD - DTW)	'	2	4	6	(WC	X CD)		'olume
	7.19		0.04	0.16	0.64	1.44			~ 5	BL
	lity Meter: Type (5).					Date o	f Sampling	818	110	
Other:								110	2	
	pling Method: Łow I					Time o	f Sampling	128	2	
Screened Ir	9 111	5	S	ampling Depth (d			saturated s	screen):	11'	
Time Start P	100			Time End Purge	: 154	1			11/2	
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/CM ± 3% (UNITS)	Turbidity (NTU)	(n ± 1	ed Oxygen ng/L) 0% or mg/L, ±0.2	Tempero (°C)±3		ORP (mV)
1511	7.20	0.24	7.12	0.639	17.7	7.0	09	19.13	ζ	25,1
1514	7,23	0.24	6.91	0.617	7.4	0.3		18,3		14.0
1517	7.23	0,24	6,66	0,618	5.1	0.0		1811		11.4
1520	7,23	0094	6.91	0.620	3.5	0,1		18,0		8,3
		,						, 0,		- 01 0
							- A			
		200.00		1	*1_					
Sampling C	Comments: / Dx	ALC THE			99					
	ple Number/ID		ner Type	Preservative	Field Filte	ered?	F	Analysis Re	quest	
MINDS	- 20100818	1 x 280 M	u AGB		(No) 0.45	0.10	N.A.			
	1	Ix IL	AGB		(No) 0.45	0.10	44: 1-	1010	10,11	-13
	784	2 500 N		43504	No 0.45			1		
		4 x 500ml			(No) 0.45				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
PURGE WAT	ER DISPOSAL NOTES;	en	(003)			3400		•		
Total Discho	arge (1Gal=3.8785Ltr)	N3/H	Disposal Me	ethod: Drumme	ed Reme	d. System	Other:			
Well/Site Co Well/Securit Surface Wa Action Item	ondition Information:  y Devices in good co ter Infiltration (if yes, on the constitution of any well Condition Comm	ondition? (i.e.: Modescribe)? monitoring well	onument, Boli	ts, Seals, J-cap, Lo	ock) 'ES 👄			Yes nument Yes		No II Casing
• Three succe	essive readings should be	e within the indicat	ed parameter l	limits prior to samplir	ng				,	· · · · · · · · · · · · · · · · · · ·

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

Client:/	environmental.com  Colfax  Colfax  ing Personnel:			92-001-0		Well ID 1	Number:	MW	02	_
Total Dept	Depth to Water (Prior To Purging)	Water Colum	nn l	Casing Diame	ter (inches)	6	Casing '			al Purge olume
N. question	7,95		0.041	0.16	0.64	1.44	(1107	. (33)		
Sampling M Other:		fonba ID Bladder Bailer	#_ SEI #-5	?			Sampling:	-	50	
Screened In	oling Method: Low Flaterval: 6-20		Sa	— mpling Depth (a	innroy the o		Sampling:			/
	urge: 1526	.9		Time End Purge:			aluidied so	sieeri). 🙈	15	
Time (3-5 min intervals)		Rate of Purging (Liter/min) 0.1 - 0.5	pH ± 0.1	Specific Conductivity 5/1/2 ± 3% (UNITS)	Turbidity (NTU)	Dissolved (mg ± 10	d Oxygen g/L) % or ng/L, ±0.2	Tempera (°C) ± 3		ORP (mV)
1528	7.96	0.170	5.82	0.097	21/.0		35	20.		-45
1534	7.96	0.130	5.55	0.096	84.8	t	.59	18.0	8	-87
1537	7.96	0.132	5.63	0.096	05.0		.50	18.	77.7	-90
				8/18/10						
Sampling Co	omments: Set f	lackde so	lids v	wible du	ning pu	Sins	,		1	
	ole Number/ID	Contain		Preservative	Field Filte		ار	nalysis Red	quest	<u></u>
11	-20100818	1-250 1-16A 2-500 4-500	mber ml poly	H,504	No 0.45 No 0.45 No 0.45 No 0.45	0.10 0.10	Name Pota	1 . 4 .	feni fy	ia fir Assess
	er DISPOSAL NOTES: rge (1Gal=3.8785Ltr):		Disposal Met	hod: Prumme	d) Remed	d. System	Other:		(9)	
Well/Security Surface Wat Action Items	ndition Information:  y Devices in good corer Infiltration (if yes, des (e.g.: repair of any repell Condition Comm	ndition? (i.e.: Morescribe)? monitoring well c	components)	NO YI	ck) ES ⇒			Yes nument Yes	Well	No Casing No

<sup>`</sup>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

### **GROUNDWATER PURGE AND SAMPLE FORM**

Client:		Pro	-			κ.Λ <b>4.</b> .\	13			
	ling Personnel:		9 #:			Well ID	Number	: 10/W	12	_
rieia/samp	iling Personnei:	) I (More)			-					
	<i>*</i>									
Total Dept	and the statement of the party and the	Ser 1 Service Service Service Constitution (Service Service Se		Casing Diame	ter (inches),	Øa	1	Volume		al Purge
000	(Prior To Purging)	(TD - DTW)	'	3	4	6		X CD)	28 3	olume
30.3		11,75	0.04	0.16	0.64	1.44	1.8	8	~~	31
Water Qual Sampling M	lity Meter: Type 5	1556 t Turbidi Bladder Baile	netco D#r			Date of	Sampling	8/18	110	<u> </u>
Other: Purge/Sam	pling Method: dow F	low Other:				Time of	Sampling:	173	7	
Screened Ir	nterval: 5-19.	5	S	ampling Depth (a	pprox. the c		- ii		121	
Time Start P			30000	Time End Purge				-	10	-
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	Turbidity (NTU)	(m ± 10	d Oxygen g/L) 0% or ng/L, ±0.2	Tempero (°C) ± 3		ORP (mV)
1725	8.58	0.24	6.98	0.708	32.4	30	The second second	19.2	5	-11.3
1708	8,58	0.24	6.85	6.768	15:6	0,4	00.040	18.9	_	-11.5
1731	5,58	0,24	6.82	0.710	9.0	0.3		18.8		-18,2
1.734	8,58	0,24	6.78	0.713	7.3	0.3		18,9		-21.5
							-			
		2 12								
										-
				bus				1800		7
Sampling C	omments: /DM			<u> </u>						
- G	701,									
Samj	ple Number/ID	Conta	iner Type	Preservative	Field Filte	red?	Α	nalysis Re	auest	
MWB	- 20100818	5 1x 250m	AGB		No 0.45	0.10	N.A.	8 Pota	1677	tu
	/	1216	AGB		No 0.45	0.10	10, 1.	1		U
	) pu	3 x 500		Hason	<b>(No)</b> 0.45	0.10				(mmi-()
	!	4 x SCEr	1 Cely	TENER TO SERVICE STATE OF THE	No 0.45	0.10		λ		
PURGE WAT	ER DISPOSAL NOTES:	1001								
Total Discho	arge (1Gal=3.8785Ltr):	~3/4	Disposal Me	ethod: (Drumme	Remed	d. System	Other:			
Well/Site Co	ondition Information:				)					
	y Devices in good co		onument, Bol	_	3		<	Yes		No
	ter Infiltration (if yes, o			12020120	£S)⇒		Mo	nument	Well	l Casing
	s (e.g.: repair of any	-						Yes	(	10)
Additional	Well Condition Comr	Herris or Expland	alion of any A	ccess issues:	M					
	10 10 10 10 10 10 10 10 10 10 10 10 10 1						1	1 :		
• Three succe	essive readings should be	e within the indica	ted parameter i	√ limits prior to samplin	g				-	

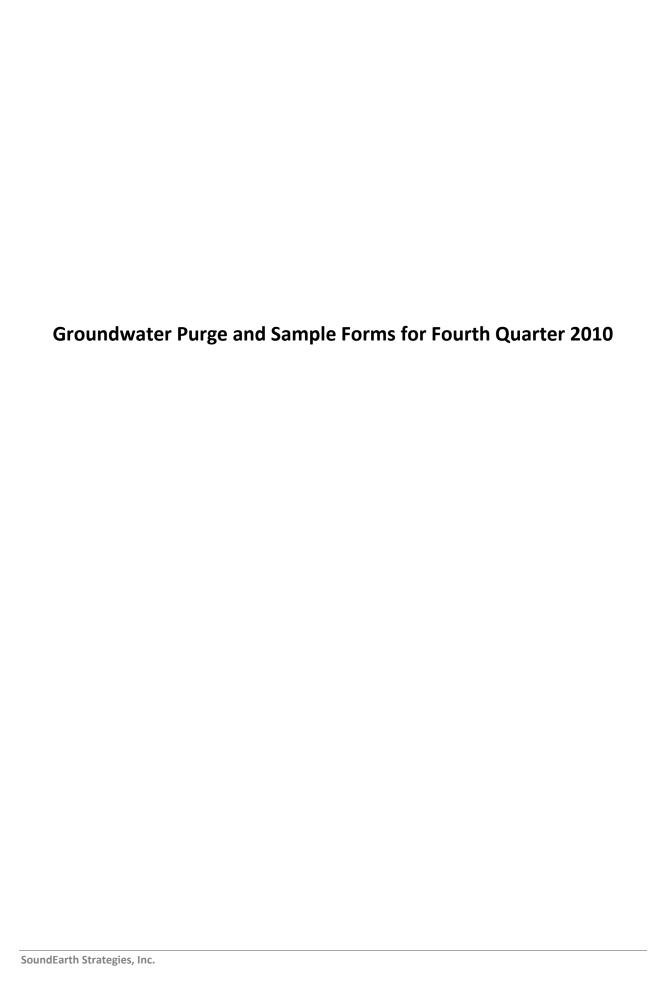
All units of measurement are in feet and/or gallons unless otherwise indicated
If static water level is above the screen, avoid drawdown of water level into the screen

ST	RATEGIES											
www.sound	environmental.com											
Client:					72-00 (	_						
Site:Cc			e #:_	4		-	Well ID	Numbe	r. CMW	05		
Field/Samp	ling Personnel:	). Mardel		-110								
T 1 1 5 1		T										
Total Dept	h Depth to Wate (Prior To Purging)	er Water Colu	NATARCOCKS .	1	Casing Diame	2000			Volume		tal Purge /olume	
	8.90	(10-0111)		0.041	0.16	0.64	1.44	(wc	X CD)			
		Tortu	13/12/7		0.16	0.64	1.44	-		$\sim$	31	_
Water Qual	ity Meter: Type_\\S	1556°	D# -				Date o	f Samplina	5/18	110		
	Method: Peristaltic						- 410 0	, camping				
Other:									105	۲		
	pling Method: Tow							Sampling	Charles to the second			
Screened Ir	U, J	0.5		Sc	ampling Depth (c			aturated s	screen):	191		
Time Start P	urge: 1840 Water Level	Rate of Purging			Time End Purge	: 190						
(3-5 min	(drawdown <0.33')	(Liter/min)	На	± 0.1	Specific Conductivity	Turbidity		d Oxygen ng/L)	Tempero	turo	ORP	
intervals)	VL Meter or Bubbler	0.1 – 0.5	Jan. 1		MS/2m+3%	(NTU)	± 10%	or < 0.2	(°C) ±		(mV)	
Icilo	501	000	1		(UNITS)	-0.111		201	1800	_		
1842	8,94	0,95		<b>े</b> ४	0,985	17.14	3.3		1810	-	-71.2	
1848	8199	0.35	7.0	38	0.983	9,70	0.0		17.0		-87,2	
1851	8,94	0.35	7,0	-	0.976	7.68	0.1		16.8		-90,8	
1001	0111	0(0)	100	6	C. ITX	-1, 4-1	0,1	6	16.7	1	-90,8	
					W							-
	16											-
					PM							-
												-
												-
											_	
Sampling Co	omments: DA	1										
Samr	ole Number/ID	Contai	nor Tur	20	Drosenietius	T:-1-1 F04	10					
	5-30100818				Preservative	Field Filt			nalysis Re			
CPIWO	2 4400 8(8	3 x 500 m		ely	PO86H	No 0.45		Not.	Attenue	うら	)	
		3 X 300 P	VI T	ora -		No 0.45						
						No 0.45						
						100000000000000000000000000000000000000						_
PURGE WATE	R DISPOSAL NOTES:	101										
Total Discha	rge (1Gal=3.8785Ltr)	: ~3/4	Dispo	osal Met	thod: Drummé	d) Reme	ed. System	Other:				1
				100								4
	ndition Information:			1 12 15						_		
	y Devices in good co		onume	ent, Bolts	The state of the s			758000	Yes	g = 1	(6)	
	er Infiltration (if yes, on the second secon	A SOCIA SOCIA ACIDA SA ANTA ANTA ACIDA SA ACIDA	comp	onental	NO Y	5 ⇒		Mo	nument	We	Il Casing	
	Well Condition Comr	nents or Explana	tion of	anv Ac	cess Issues.				Yes		KO)	
		One boil	3 No	n-ux	the and non-	renovable	- Repla	ced T-	lua lala	coale	dat	
W 5 3000 P	Fully xcur	e current o	nc d	ن ال	lack	2000		- 1		- TOTAL	-1.10	-
	1 100	.,,	J- U		100.00							
TI	and the second control of the				12 12 12 12							

- Three successive readings should be within the indicated parameter limits prior to sampling
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S TRATEGIES							25	
www.soundenvironmental.com	nur Pro	iect #: OC	597-001 5	,				
Client: N. Colfex Colsite: NCPC  Field/Sampling Personnel:	_ Site	e #:	ic cop-c	Ĺ	Well ID	Number:	MWZL	-
Field/Sampling Personnel:	AJL and	D. Men	del		**CII ID	Norriber	- 4	
Total Davids   Davids to Ma	h							
Total Depth Depth to Wa  (Prior To Purging	AND THE STREET STREET STREET STREET STREET		Casing Diame	ter (inches) 4	6	Casing Volui	0.000	tal Purge Volume
8:79	. 17.5	6 0.041		0.64	1.44	(**************************************		
	Honbe	CELL	2			-		0:03
Water Quality Meter: Type Sampling Method: Peristaltic Other:			<u>2</u>		Date of	Sampling: Z	0100	<u>819</u>
Purge/Sampling Method: Low	Flow Other:				Time of	Sampling: C	956	
	- 18.5	Sc	ampling Depth (a	pprox. the c				7
Time Start Purge: 0935			Time End Purge		1			
(3-5 min intervals)  WL Meter or Bubbler		pH±0.1	Specific Conductivity  \$\frac{1}{2} \frac{1}{2} \frac\	Turbidity (NTU)	(m	10.000 000	nperature C) ± 3%	ORP (mV)
0938 8,73	0.16	5.96	53.1	80,3	4,0		8.5	39
0941 8.72	0.16	5,71	87.7	1 FE	2 1.0	16 1	8.0	-8.1
0944 8,72	0.16	5.767	99.8	73.3		78	811	-105
0947 6,72	0.16	5.72	99 9	32,4	0.5		8.6	-115
0953 4.72	0.16	5,73	99,9	18.4	6.4		8,2	-103
0133 3.1%	0110	2,1%	17.7	15.7	0,-6	3,36	0,0	-127
							-	
			don					
					_			
Sampling Comments:	1							
sampling comments.	ı							
Sample Number/ID	Contai	ner Type	Preservative	Field Filte	red?	Analys	is Request	
MU26-20100819		n12014	H2504	No 0.45	0.10	Natural	Afker	water -
í l	3-5011	1 poly		No 0.45	0.10	Mortals	4-1	
			- 5m	No 0.45	0.10		\$	ar
				No 0.45	0.10	- 17 mm		
PURGE WATER DISPOSAL NOTES	1214							
Total Discharge (1Gal=3.8785Lt	1:~0.75	Disposal Me	thod: Drumme	Remed	d. System	Other:	7 1 200	
Well/Site Condition Information								
Well/Security Devices in good of Surface Water Infiltration (if yes,		onument, Bolt:	(C) (A)	SK at		Yes		(No)
Action Items (e.g.: repair of an	MITCHEST (V.S200-V.V.SECONDARY) ■ 1.244 IV	components	NO A			Monume Yes	ent (We	(Cosing)
Additional Well Condition Com	i		(1)			168		(110)
	ults missing a		The state of the s	(ola?) 1	SEWN 5	itreathly do.	M 1457	Ne
of casily	, 3		11.	· · · · · ·		7 -00		
The second secon				-				

- 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



S	TRATEGIES								
www.sour Client:	moo, afnumentonivostivosti		!						
Site:	1cpc	_ P	roject#: ite #: <b>N</b>	1000	_			M 1	0.3
	pling Personnel:				_	WellID	Numbe	er:_Mن) (	16
					_				
T.1.15									
Total Dep	oth Depth to Wate (Prior To Purging)			Casing Diam	-			y Volume	Total Purge
20,5		12.81			0.64	6		CXCD)	Volume
1				41 0.10	0.04	1.44	8	23	
	ality Meter: Type <u>(3)</u> Method: Pelistaltic	NAME OF THE OWNER OWNER OF THE OWNER OWNE				Date of	Sampling	:17Nov	10
	pling Method: Law	- Flow Other:	11			Time of	Connu l'a a	: 1729	
Screened	nterval: 10 - 20,	5		Sampling Depth (	approx. the o	center of s	aturated	screen): :	
Time Start F	Purge: 1720			Time End Purge	):			screen,	
Time (3-5 mln	Water Level (drawdown <0.337)	Rate of Purging (Liter/min)		Specific		Dissolved	Oxygen	T	
intervals)	WL Meter or Bubbler	0.1 - 0.5	pH ± 0,1	Conductivity  M3/CM ±3%  (UNITS)	Turbidity (NTU)		g/L) or < 0.2	Temperate (°C) ± 39	ure ORP (mV)
1721	7.64	. 2 5.	4.89	0,543	107	(a. (	ol	13.65	-53
1724	7.64	01198	6.80	0.355	63.8	0.8	3	14.24	
1727	7.65		(0.81	0.554	58.5	0,6		14.43	
1733	7.45		6.80	0.554	53.1	0,4		14,53	-36
1736	7.65		6.78	0,555	102.5	0.4		14,56	
1/36	1.000		6:17	0.554	68,4	0.3		14.70	0 -89
		N N							
Complian C									
Sampling Co	omments:	5 Day 1							
Same	stkits - Fe =	Contai	ner Type	310 1A2/4	Fezt=	3, 1 mg/	-		
MWOZ-	20/01/17	2 × 40 m	0 4/00	rieservalive	(N) 0.45	0.10		nalysis Requ	est
	2010111	1 x 500 n		HIV HS SOL	<b>X</b>	0.10 M	thinke		
		2×500m		MoselMon	(%) 0.45	0.10	sel Nit		porus
· · · · · · · · · · · · · · · · · · ·	and the same property and the latter of the same and colors and the same and the same and the same agency of		10-1	1 VICTOR NOT		:711	ל,א,זהדי	e/ Toute, S	ulate/fil
PURGE WATE	R DISPOSAL NOTES:								
Total Dischar	ge (1Gal=3.8785Ltr):		Disposal Me	ethod: Drummed	Remed	d. System	Other:		
								***************************************	
	ndition Information:	***							
	Devices in good cor er Infiltration (if yes, do		onument, Bol	100000			,	es/es	No
	(e.g.: repair of any r		component	NO YE	\$ ⇒		Mon	ument \	Well Casing
	ell Condition Comm						'	'es	No
				0000 100000,					
			-		Downer	We183	I	Temm=10	5.3% =1
Three success     All units of markets	sive readings should be easurement are in feet a	within the indicate	ed parameter l	imits prior to sampling	DeH=	6.38	()20	- 10%	will
If static water	revel is above the scree	en, avoid drawdou	vn of water law	alcated (Sylvin)	Sp.C. =	557	000	1.10	
				C. II 110 11 10 SCIEE!!		MSIM	سر الماءو	1.10	1717

1	SOUND
19	ENVIRONMENTAL
53	STRATEGIES

₹3, <b>2</b> I	RATEGIES											
www.sound	lenvironmental.com	_		()K	90-001							
	c) Fax	. Pro	oject#:		92-001	-				11.	1 1-5	,
		Mandi	e #: _			-		Well ID	Numbe	r: /1W	0	<u>&gt;</u>
Field/Samp	oling Personnel:	1-0-4-01				_						
4.		-			15							
Total Dept	th Depth to Wate (Prior To Purging)	er Water Colu (TD - DTW)		,	Casing Diame		~			Volume		al Purge
90.5	7.88	13,65		0.041	0.16	0.6		1,44	J. A. A. S.	X CD)		'olume
10:5	1 7100	10,00	(	0.041	0.16	U.0	4	1.44	× (	00	$\frac{\sim}{}$	41
	lity Meter: Type Hone			4				Date o	f Sampling	11/18	110	<u> </u>
Other:			å							V	رس و	
Purge/Sam	pling Method. Low	low Other:			_			Time o	f \$ampling	: 090	15	
Screened Ir		0.5		Sa	mpling Depth (a	pprox	x. the c	enter of :	saturated s	screen): .	~ 1.3	>. 5′
Time Start P	urge: ON7				Time End Purge	: j	012	>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Time	Water Level (drawdown <0.33')	Rate of Purging (Liter/min)			Specific Conductivity				ed Oxygen			
(3-5 min intervals)	WI Wefer or Bubbler	0.1 – 0.5	pH±	5 0,1	Conductivity  M 1 ± 3%  (UNITS)		rbidity NTU)	200	ng/L) 5 or < 0.2	Tempera (°C) ± 3		ORP (mV)
0920	7.85	0.15	5.6	-8	65.7	N	14	17.	53	8,3	4	118
0993	7.85	0,15	5.7	55	64.6	Ť		3.		9.41		48
0996	7.85	6,15	5,0		63.8			D.		10.19		3
0729	7.85	0,15	6.0		65,6				16	10.5	0	-35
0937	7,85	015	6.1	0	63,4			1,6	28	10.7		-41
0135	7,85	0.15	6,	13	63,1			1,1		10.9		-55
0938	7.85	0.15	6.		6310			110		10:49	-	-65
0141	7,85	0,15	6.10	الته	67.8			0.0		11.07	0.00	-75
** Supplementary partitions of any horizon	a market with the control of the con		My taken and a majoritary place in		740				···		-	10
					To be an only	- Amount of the Party of the Pa	-					
									No.	whether the street		
4.												_
Sampling C	omments:	, Oc	wam!	010	99		Ten	ORP=-	-69	MV Ten	P= 1	14,33
in tacking	els, Wills- Alba	S Cluss.	PH=	6.01	5, L.	= 0	53,€	H)/M	D.O. =	0.97	MIL	C2
	ole Number/ID	Contai			Preservative	3 TH 32-95 ROW		MARCH STATE OF THE PARTY OF THE		nalysis Red		
MM03-	30101118				FICT	The state of the last	K	Company of Person Street, Square or Springer,	Nietus.	HA IA	TALL	tion
The same of the sa	9	2x 500	11 (0	m	1+	-	0.45					1
(i	<u> </u>	1 X Soun	2	14	HIJXY	CNÓ	0.45	0.10		W		
		And American Property and American	AND THE PERSON NAMED IN	the objective and arrange	the second secon	-No	0.45	0.10	COMMONS AND WARREST AND	to a few free processing administration on the second	40.4 S.4.4 LVM 0111	********
DUDGE WATE	ED DIEDOCAL MOTEC											
	ER DISPOSAL NOTES:		Dia-									
TOTAL DISCHA	rge (1Gal=3.8785Ltr)	~ 1	Dispo	sal Met	hod: Drumme	<u>d</u>	Remed	d. System	Other:			
Well/Site Co	ndition Information:				*			÷				
	y Devices in good co		onumer	nt, Bolts,	-	ck)				(Yes)		No
	ter Infiltration (if yes, o			•		ES =	⇒		Mo	nument	Wel	l Casing
	s (e.g.: repair of any			and the second second						Yes		140
Additional \	Well Condition Comr	nents or Explana	tion of	any Ac	cess Issues:	می ر						200
					/	, ,						
<del>30 - 38 0.00</del>			_									
• Three succes	ssive readings should be	within the legic-t	nd n ~	mata - 11	ita prior to "		۸	- 10	2 19	//		_
	ssive redaings snould be leasurement are in feet					3 6	1	= > 2	),U r	13/1		
	er level is above the scre	100 CT 10				5	· ·	71	<u>ت</u>	. 11 -		
						-		11,	- P	5/1		
						te	2+	= 3.1	5,0 r 3 , 0	M3/L		*
										W.		



S	TRATEGIES								
Client:				12-001-0	21	Well I	D Numbe	r: Mwo	) <sup>*</sup> ]
Field/Samp	oling Personnel:	erit Nav	Nhow		- 10		» Numbe		
Total Dep	Depth to Wate (Prior To Purging)	Water Colu		Casing Diame	eter (inches)	6		Volume	Total Purge Volume
20.0	5.13	11.32	0.04	0.16	0.64	1.44	7,5		*
Sampling N Other:	nlity Meter: Type Quantity Method: Peristralitic	Bladder Baile					of Sampling	: 1057	
	nterval: 5"- 20		S	ampling Depth (a	approx. the o	center o	f saturated	screen): 12	
Time Start P	Purge: 1038			Time End Purge	:		7 001010100	Ciccii). 75	
Time (3-5 mln intervals)	Water Level (drawdown <0.33°) WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 - 0.5	1.0 ± Hq	Specific Conductivity M5/CM ±3% (UNITS)	Turblaity (NTU)	(	ved Oxygen (mg/L) 1% or < 0.2	Temperatur (°C) ± 3%	re ORP (mV)
1037	8/21 8,21		6.85	0,677	40,2	13	3.99	10.15	-5-1
1042	8,21	0.192	6.31	0.703	23.4		,28	10.62	
1645	8,21		6.84	0.707	21.5	0	130	10.75	
1048	2,22		6.38	0.707	20,4		168	10,78	-102
1054	8,22		6.37	0.705	21.2		.62	10.77	
			6.88	2.708	20,2	U,	5-8	10,81	-109
Sampling Co	omments: Cits - Mn = ole Number/ID	>3.0 mile	Fe = 7,6	mile Fe	2+=1.42	ng /L			
		Contai	ner Type	Preservative			A	nalysis Reque	est
mw07-	2010/118		E VOA	1401	No 0.45		Methan	e_	
and the state of t	AND THE RESIDENCE OF THE PROPERTY OF THE PROPE	1 × 500.		None	(N6) 0.45		Nat. Ar	In.	MARKET THE PARTY OF THE PARTY OF THE PARTY.
	renna di Luda in 1900 di Propinsi di Manadanda Luda in 1900 di Propinsi di Propinsi di Propinsi di Propinsi di	1 × 500	me foly	142504	No 0.45		Hat. A	Hn.	
PURGE WATE	R DISPOSAL NOTES:								
Total Dischar	rge (1Gal=3.8785Ltr):		Disposal Me	thod: Drummed	Remed	d. System	Other;		
Well/Security Surface Wate Action Items	ndition Information:  Devices in good core Infiltration (if yes, decorated in the condition Committee)  Well Condition Committee	escribe)? monitoring well	components)	NO (YE			Men	Yes yrnent W Yes	No Vell Casing
					D	and at 1	1.77		
<ul> <li>All units of me</li> </ul>	sive readings should be e easurement are in feet a r level is above the scree	nd/or gallons unle	ess otherwise ina	licated (M)	Sp.C =	5.7. 34.F	IN TEM S D.O W/norp	p = 11,8 = 3,69 = -31	10Z

### **GROUNDWATER PURGE AND SAMPLE FORM**

	RATEGIES											
	lenvironmental.com			. ^=	577 -C811		8.5					
	NCPC	. Pro	ject #	#: <u>い</u>	592-001	-				r 41 (1)		
			∋ #:.					Well ID	Number	- 11W	1'd	
Field/Samp	oling Personnel:	Mendi			*)		•					
		*										
Total Dept	th Depth to Wate	er   Water Colu	mn		Casing Diame	ter line	harl		Cousins	Values -	T. 1	
Total Bop	(Prior To Purging)	(TD - DTW)	11111	1	2	4	163	6	1	Volume x co)		tal Purge Olume
15	8,64	6.33		0.04		0.64		1.44	1.0			41_
	lity Meter: Type (10)			in 4				Date o	f Sampling	: 4/17	/10	
Other:	pling Method: Low	5								135	()	
Screened Ir				C	annolina Double (s		11		Sampling			
Time Start P	<i>- ا لي</i>	>		30	ampling Depth (a Time End Purge				saturated s	creen): ~	1,5	
Time	Water Level	Rate of Purging	T		Specific		196		d Oxygen	1		
(3-5 min intervals)	(drawdown <0.33') WL Meter or Bubbler	(Liter/min) 0.1 – 0.5		i± 0.1	Conductivity  SIM ± 3%  (UNITS)	Turbio (NTI		(n	ng/L) or < 0.2	Tempera (°C) ± 3		ORP (mV)
1304	8,40	0.13		83	0.101	NI	В	4.0	l	14.08		40
1304	\$ 130	0.10		81	0.107			213	6	14.53	,	40
1330	5,40	0.10		63	0.167			5,0		15:03		38
1333	6140	0.19		86	0.168			1.5	5	15.08		34
1336	5,70	0.13		90	0.101			1.35	<u> </u>	15.48		26
1339	हाउ0	0,13		47	0,107			1.9:	3	15.4		17
1349	8,70	0110		96	0.109			O.R		15.5		1
1345	6,70	0.10		10	0,101			0.3		15.5		-6
1348	हारू	619	0	.14	0,109			0,7	2	15,5	6	-13
· · · · · · · · · · · · · · · · · · ·			-	-				(C)	1			
									<u> </u>	- 500		
Sampling C	omments:	D's	Λ-in	ill C	21435	1 19		Temp :	-16.90	27		A sale
No terbishing	ules. Water open	5	0	H=6.2	21435 Sp.C. = 0.	699 SI	М	DO	=0.80	mali a	RP-	18 M
Samp	ole Number/ID	Contai	ner Ty	ре	Preservative		Filter	ed?	A	nalysis Rec	ruest	10 M
-GIWM	2010117	Dx Yenl	50	1	HCI	(NO)	0.45	0.10	Notwal	* * * * * * * * * * * * * * * * * * * *	vetic	- 1- 1-6
d diffusion in the second		2 x 500		Pely		(NO)	-	0.10	400-01	1		
	hA (	1 x SCC+		Poly	HDSC4	(No)	0.45	0.10	To be the second and the second	1	***	
**************************************	D^(					-No-1	0.45	0.10		· · · · · · · · · · · · · · · · · · ·		
PURGE WAT	ER DISPOSAL NOTES:											
	rge (1Gal=3.8785Ltr)	: ~ 1	Disc	osal Me	thod; Drumme	d Re	emec	d. System	Other:			
		, - (						2. 0/3/0/11	Ollici.			
	ndition Information:											
	y Devices in good co		onum	ent, Bolt		-				Yes		No
	ter Infiltration (if yes, o				NO (YI	ES 🚞	>		Mo	nument		l Casing
	s (e.g.: repair of any Well Condition Comr									Yes	<	No
Additional 1	TOIL CONGRIGHT COME	norns or Explorid	iiOHC	i uliy AC	Cess issues:	M						
									,			
										* 1404 X		
	ssive readings should be neasurement are in feet					9 /	MA	= >	3,0,	mg/L		

• If static water level is above the screen, avoid drawdown of water level into the screen

www.sound	fenvironmental.com							
Client:		. Pro	ject#: Ot	100-60	_			
01101	situ		#:			Well ID Numb	per: MW13	3
Field/Samp	oling Personnel:	) Mendy			_		7 61-	3 aplicate
						. I	1614 1	A Maria
Total Dept	th Depth to Wate (Prior To Purging)	water Colui		Casing Diame			The state of the s	Total Purge
19.5	8.18	11.30	0.041	0.16	0.64		WC X CD)	Volume
				0.10	0.04			ンリー
	lity Meter: Type HU Method: Peristaltic					Date of Sampl	ing: 11/17	110
	pling Method: (Low I	Flow Other:				Time of Sampli	ing: 1005 /	1130
	nterval: 5-19, 5	>	Sc	ampling Depth (a	pprox. the c			
Time Start P	urge: 0935			Time End Purge		50 50		100
Time	Water Level (drawdown <0.33')	Rate of Purging (Liter/min)		Specific		Dissolved Oxyge	en	
(3-5 min intervals)	Willer or Bubbler	0.1 – 0.5	pH ± 0.1	Conductivity MS/M ± 3% (UNITS)	Turbidity (NTU)	(mg/L) ± 10% or < 0.2	Temperature (°C) ± 3%	ORP (mV)
0939	9,30	0.10	5,96	69.0	NA	3.25	13.92	168
0943	8,30	0.10	5.90	69.1	1	1.03	14.54	153
0945	8,30	019	5,95	E9.4		0.86	14.80	126
0948	₹, DO	0.19	6,00	69,7		0,79	14.97	94
0951	8,30	0.10	6.06	70,0		0.75	14.95	63
0954	6.00	0.19	6.13	69.9		0.68	15.13	28
0957	8,70	07.12	6.17	69,8		0.66	15.39	
1006	8. JO	0.13	6.18	69.9		0.66	15,30	-3
T-100-00-00-00-00-00-00-00-00-00-00-00-00	And the second s		-61					
			and the same of the same of	A COLUMN THE PARTY OF THE PARTY				
						-		
Sampling C	omments:				[BA]			
Jumpling C	twisting ou	re on Horiba.	myst a	frees clear	Dint I pt	= 71.6 ms/n	D.C. 0.52 WL	@1110 Teap=16532
Sami	ole Number/ID	Contair	ner Type	Preservative	Field Filter	= the ws/n	Analysis Reque	1010-16032
	A1110108		VOA	HCI	(No.) 0.45			CONTRACTOR OF STREET
MW99-	and the second second to be seen to be seen as the second	1x 500m			No 0.45	10,10	EX+MTBE	
1 1 2 1			VC 4	HLI	on an applitude or an armony	0.10	CWIAI	
		ax 5ccn1		1101	NO 0.45		FOR MWIB-	MICHITANI )
		1 x scent	Pely	HOSCH	(30)	118.	For Net Att	CACINE 3
PURGE WATE	ER DISPOSAL NOTES:	•	J	11 470 1			i i i i i i i i i i i i i i i i i i i	coell Bi
Total Discha	rge (1Gal=3.8785Ltr):	: ~ 1	Disposal Me	thod: (Drummed	Remed	d. System Other	:	
Well/Security	endition Information: y Devices in good co ter Infiltration (if yes, c		onument, Bolts	s, Seals, J-cap, Lo			Yes Monument W	No Voll Carina
	s (e.g.: repair of any	reminer verse a medical Comp	components)				Yes	Vell Casing
	Well Condition Comm						103	CINO
					16-1			
Person				e e	λ A	-14	/1	
	ssive readings should be				, MA	1,0 m	5/4	
	neasurement are in feet er level is above the scre				Fc	= 4,5 4	3/1	
s.anc male		, 2.3/4 4/4/4001	or water leve	or and the screen	_	0. 0.0	y	
					te	= 1,6 mg	7 mg/L	

4 ST	RATEGIES environmental.com			<b>♦</b>	590 071	e .						
Site:	cifax	. Pro Site	oject# = #:_	:	592-cc1	_		Well ID	Numbe	.MW	95	
Field/Samp	ling Personnel:	Mendel				_			, 1011100	•	, gr	_
							8				4	
Total Dept	h Depth to Wate	er Water Colu	mn	4	Casing Diame	eter (inc	hes)		Casing	Volume	Tot	al Purae
	(Prior To Purging)	(TD – DTW)		3	<u>,</u> 2	4		6	(WC	X CD)	٧	olume
17,5	6.85	10.6		0.041	0.16	0.64		1.44	1.7	0	7,	DL
	ity Meter: Type 10 ethod: Peristaltic			Ч					f Sampling			<u>e</u>
	oling Method: (ow)				620 30			Time o	f Sampling	: 1548	3	
Screened In	iterval: 5 - 17.1	5		Sc	ampling Depth (a	pprox.	the c					51
Time Start P	1 - 0 1			- 1	Time End Purge	: 16	06					
Time (3-5 min intervals)	Water Level (drowdown <0.33') WL Meter or Bubbler	Rate of Purging (Liter/min) 0.1 – 0.5		± 0.1	Specific Conductivity 175/17 ± 3% (UNITS)	Turbi (NT		(n	ed Oxygen ng/L) 6 or < 0.2	Temperation (°C) ± 3		ORP (mV)
1531	6,86	0.18	6.0	-	5610	NI	A	3,8	55	14.17		6
1534	6.86	0.18	6.0		58,0			1.1		14.90		-5
1534	6.766	0.18	6.1		57.7	1			0.46	15.4		~ ( <u>.</u>
1540	6186	018	6,0		58.1	1		0.		15,7		-7
1543	2.86	0.18	6.0		58,7	1		0.		15.85		-8
1546	6.86	0.18	6,0	06	58.8			0,	58	15.97	3	-9
	STATE OF STREET STATE OF STREET, STREE					-						
			Ber									
				No. 2 Concession	E-manufacture of the second	-						
					The second second second second	-	-					
								The same of the sa	and a realization of the second			
Sampling Co	omments:	181-11	Dev	1160	164		DA	ORP=	30	1/		17.62
No twick	imper who e du		9	H =	6.01 5	.C.=	: 5	9.1 MS	32 14 D.C	HV To	73	17,03 My/L
A STATE OF THE PERSON OF	ole Number/ID	Contai			Preservative	-				nalysis Rec		
MM35.	- De101177	3 x 40 ml			HCI	(NO)	-	0.10	Natur	.) Afte	tour	ren
	$\sim$	AX SCA		2 h		1		0.10	MANAGEMENT OF THE PARTY OF THE		ne delle	
	m-	1x 500 1	-1 K	~ ~	Hasey	(P)		0.10	-	, p		
						No	0.45	0.10				and the same of th
DIIDCE WATE	R DISPOSAL NOTES:											
	rge (1Gal=3.8785Ltr)	: ~ 12	Dien	oral Ma	thod: Drumme	d ID		٠ ا	011			
TOTAL DISCHA	190 (1001-0.070011)	. 10 1 2	Disp	J301 1VIE	inod. Diomine	u k	emec	d. System	Other:			
Well/Security Surface Wat Action Items	ndition Information:  / Devices in good co er Infiltration (if yes, o s (e.g.: repair of any  Vell Condition Comr	describe)? monitoring well	comp	onents	NO (Y)  ccess Issues:	ES )_	>	S. Constant	MO	Yes nument Yes	Well	No I Casing No
				12	Schen 6	x/T	ω·	ny.				
							. 1	1	9 1	1.		

- 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

$$M_{\Lambda} = >3.0 \text{ my/L}$$
  
 $F_{e} = 0.0 \text{ my/L}$   
 $F_{e} = 0.0 \text{ my/L}$ 

<sup>•</sup> Three successive readings should be within the indicated parameter limits prior to sampling

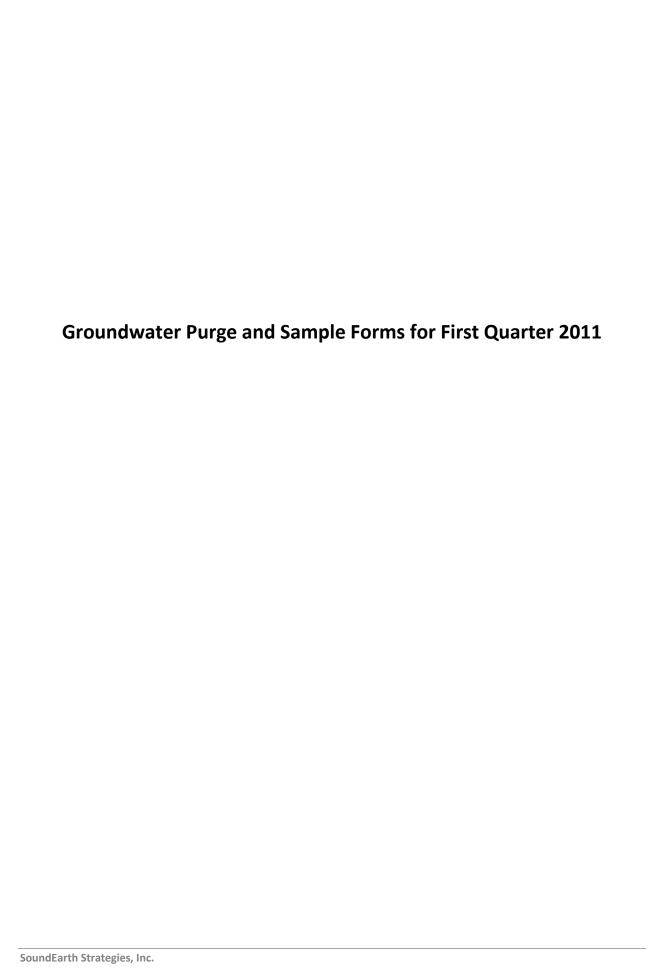
	IKAIEGE)			14							
Client:	sar tr o morac .com	Dry	niect :	# 055°	92-001-01						
	NEPC				VCPC		14/19/20 10		A4 (4 ) 19	در غوا	
1,00000	oling Personnel:				1010	_	Wel	IID Numbe	er: _ MW 2	-0	
rieid/samp	oling Personner:	or parame									
Total Dep	th Depth to Wate	er Water Colu	ımn		Casing Diame	eter (inches	3)	Casino	Volume	Total Dive	
· · · · · · · · · · · · · · · · · · ·	(Prior To Purging)	(TD - DTW)		1	(2)	4	6		(XCD)	Total Purge Volume	€
17.50	5,79	9.10		0.04	0.16	0.64	1.4	4	46		
	lity Meter: Type Qu Method: Pelisbaltic			>			Dat	e of Sampling	17 Noy	110	
	pling Method: Low						Tim	e of Sampling	1338		
	nterval: 5.5 - 10	3,5		Sc	ampling Depth (d	approx. the	center	of saturated :	screen): 17	,	
	urge: 1319				Time End Purge	):			- Um		$\dashv$
Time (3-5 min intervals)	Water Level ( <i>drawdown &lt;0.33</i> ) Will Meter or Bubbler	Rate of Purging (Uter/min) 0.1 – 0.5	ρŀ	l±0.1	Specific Conductivity M5/cm ±3% (UNITS)	Turbidity (NTU)		olved Oxygen (mg/L) 10% or < 0.2	Temperatur (°C) ± 3%	e ORP	
1320	8.52		lo	95	0.763	351		0,26	13.85	-73	$\dashv$
1323	8,52	0.228	Co	91	0.769	241		2,66	14.62		$\dashv$
1326	8153		Ŀ	.90	12.772	156		2.39	14.96		
1329	8153			.90	0.771	146		2,33			$\neg$
1332	8153			90	0.772	112		2,31	15.02		
1335	3154			89	0,773	96.6	1	1.30	15.00	-114	
						7,4	+-	1. 50	15:17	-117	$\dashv$
		(1)									$\dashv$
											$\dashv$
							1				-
							_				$\dashv$
							1				4
Sampling Co	omments: Black	the grain sur	nds	in wa	ter column	Ded	1 - will C	144 HOCRO.	= -101 W 79.103/m D	Trap= 15.9	14
Samp	s - Fe 10,0 le Number/ID	Contair	er Tyr	De Male	Preservative	Field Filte	bli a	C 20,C=	THINDIM D	10. = 0,61	<u>6</u> 7
MW26-21		4x 4cml	200			No 0.45			nalysis Reque	st	
1100 <u>66 11</u>	70111	1x 500 ml			None	No 0.45		BBIEX			1/4
		2x 4cine						TH-DX		w)	
1921100 1187 TRA	71 Harrison (1981) - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981 - 1981				Hel		0.10	Methate			
		1x 500 ml			147504	No 0.45	0.10	K-W PY	ospherus	Λ	
	R DISPOSAL NOTES:	7 × 300 11	2 10	17	None			Alkysulpa	he sulfide	o Nitrat	i
Total Dischar	ge (1Gal=3.8785Ltr):		Dispo	osal Met	hod: Drammed	d Reme	d. Syster	n Other:			7
Well/Security	adition Information: Devices in good corer Infiltration (if yes, d		nume	nt, Bolts,	***	*\}	,		(es	(No	J
	(e.g.: repair of any r		omn	onente\				Moni	ument W	ell Casing	
	ell Condition Comm							6	es	No	
	new bolts	o c. expication	J, , OI	arry Act	CC00 100UC5.						
··· euro	רווטמ ששוו										-

- 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

<sup>•</sup> Three successive readings should be within the indicated parameter limits prior to sampling

# SOUND GROUNDWATER PURGE AND SAMPLE FORM ENVIRONMENTAL

www.sound	RATEGIES  denvironmental.com			-	20							
Client:					12-001	_					_	
Site:			e #:		and the second of the second o			WellI	D Numb	er: CMW	05	
Field/Samp	oling Personnel:	Merch				_						
Total Dep	th Depth to Wate (Prior To Purging)	r Water Colu	1000000		Casing Diam	eter (	1. II.			ng Volume		al Purge
	8:31	(10 - 014)		0.041	2 0.16		4	6	(V	VC X CD)		olume
	0141	1		7.041	0.16	0,	64	1.44			~	41
Water Quality Meter: Type (Criba U-22 ID # 4 Date of Sampling: 11 / 17/10 Sampling Method: Peristalitic Bladder Bailer												
Other: Purge/Sam	pling Method: Tow F	Tow Other:			_			Time	of Samplin	ng: 173	8	
Screened Ir	nterval:	A manufacture de la compact de		Sai	mpling Depth (	appro	ox. the o	center c	f saturated	d screen):	~    . !	5
Time Start P	110				Time End Purge	э:	175	1				
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		urbidity (NTU)		ved Oxyger (mg/L) 0% or < 0.2	Tempera (°C) ± 3		ORP (mV)
CIFI	8,73	0.16	6.40		94.3	1	J/A	3	70	12,3	5	-15
1715	8143	0.16	6,55	5	95, 7		1		19	12,86		48
1718	5,73	0.16	6,60		95.3				c.T	13,15		-69
1951	हानु उ	0:16	6,50	1	91.9				30	13,6	3	-77
1704	5173	0,16	6.58	_	94,0	4-			38	13,43		-85
1727	5173 8173	0.16	6.57		93,6	+			ବୃତ୍ର	13,6		-90
1730	8173	0.16	6,55		93,1	+			06	13.99		-94
1736	873	0.16	6.59		92,9	+-			94	14.03		-97
1150	(2) (1)		6131	1	19,1	+	-	10	.93	14.08		-100
	A STATION OF	Q.A.	L. E. C., D. C. Marine S. School and	1 h )	Market Strategy and the Strategy of Strategy and Strategy			-		-		
								N. S. Alle School of the last	and and proceedings of the Advanture proper frequency of	mine and personal visit description on the state of		
Sampling Co	omments: who. Water appear	Solver Don	inclice	1810	5 Sp.C.=	93	6	)RP=	-86 10=0.	ny Temp	= 15	133 °C
Samp	ole Number/ID	Contai	ner Type		Preservative	F	ield Filte	ered?	J, O, O,	Analysis Red	quest	
CMWUS -	20101174	INOV XE	JUA		HCI	Q	0.45	0.10	Netw	al Atte		e n
enting to the second of the section of		12 x 500n	1 Rly	<b>}</b>		Q	0.45	0.10	me mi mi mi	1		That were me to the to
	(P)	1 x 5000	Filo	<b></b>	H2504	***	0.45			V	- A Part / Auto Line	MALONIA FORTZON DA PA
						No	0.45	0.10			***************************************	
	ER DISPOSAL NOTES:											
Total Discha	rge (1Gal=3.8785Ltr):	~ (	Disposal	Metr	nod: (Drumme	<del>(</del> g)	Reme	d. Syster	m Other:			
Well/Security Surface Wat Action Items	ndition Information:  y Devices in good co  ter Infiltration (if yes, c  s (e.g.: repair of any  Well Condition Comm	describe)? monitoring well	compone	ents)?	NO Y	ock) 'ES :	⇒			Yes conument Yes	Well	No Casing
All units of m	ssive readings should be easurement are in feet or er level is above the scre	and/or gallons unle	ess otherwis	e indic	cated	ng	Mi Fc Fe D	= { = (	2.4 5.5 4.6	mg/L mg/L		



Sound	arth
	ategies

Soun	<b>d</b> Earth <b>2</b> Strategies				L AIVL	) <b>3</b> /4	WIPLE	ORIVI	
Client:	Strategies NCRC	_ Pro	oject#: O	597-021					
Site:	Wiffer	. Sit	te #:		_	الم/٨/	ID Numb	or MW	UB
Field/Samp	ling Personnel:	), Mendel				Well	Numb	GI,	
					,				
Total Dept	sale per management de management de la company	1.	i	Casing Diam	eter (Inches	5)	Casir	ig Volume	Total Purge
	(Prior To Purging)	(TD - DTW)			(4)	6	1	(CXCD)	Volume
	5,98		0.0	41 0.16	0.64	1.44	1		n st
	ity Meter: Type <u>Ho</u> ethod: <i>Perista</i> ltic		11. Co	3_		Date	e of Samplir	1g: 2/1	6/N
	oling Method: Low I	Flow Other:				Time	a 6 Carrer 15 .	17	39
Screened In		The state of the s		Sampling Depth (	approx. the		of Samplin	27	
Time Start Po	urge: 1718		The same of the sa	Time End Purge		05	- Janaran BC	iscieerij	<u>υ</u>
Time	Water Level (drawdown <0.33)	Rate of Purging (Liter/min)		Specific			olved Oxygen	T	
(3-5 min intervals)	Wt Meter or Bubbler	0.1 – 0.5	pH ± 0.1	Conductivity ± 3%	Turbidity (NTU)		(mg/L) ± 10% or 00 mg/L, ±0.2	Tempera (°C) ±3	ture ORP (mV)
1891	5,98	0.15	5.67	O45	70.6		1.64	8.76	5 166
13.04	5.98	0.15	5.96	0.97	Cil	P	153	916	
1474	5.98	0,15	6,03		67.3	8	601	9.5	
1730	5,48	0,15	6.08		5716	5 6	105	9.5	
1736	5,98 5,98	015	6,14	0.98	2437		7,71	7,4	8 113
17.20	5,00	0112	6.18	0,98	30,0		7,50	वाप	1 105
	The state of the s	7.		<del> </del>					-
		The State of the S	- 11 An agreed on the party of the same of	- ran		-		-	
				The same of the same of the same of the same of		+			
(Magazi						123	The same of the sa		_
shi									and the same of the same of
Sampling Co								-	
	le Number/ID		ner Type	Preservative	Field Filt			Analysis Rec	uest
MM03-	90110916	2x YEMI	VOA	Hu	100 D.45		Not I	Hien	
	C/M	1 x 5ant	Kelly -	HOSCH	0.45		V		
u para a la coman		3x 5000		405	(No) 0.45		Sulfid		
		124 Such	1 Kely		(6) 0.45	0.10	TH WA	isn thim	edes thinks
	R DISPOSAL NOTES:								
Tordi Dischar	ge (1Gal=3.8785Ltr):	21.09	Disposal M	ethod: Drymme	d Reme	ed. Syste	m Other:		
Well/Security Surface Wate Action Items	ndition Information: Devices in good coler Infiltration (if yes, die.g.: repair of any left Condition Committee in the condition	escribe)? monitoring well	component	(NO) Y	ock) ES ⇒		2.5	Yes nument Yes	No Well Casing
<ul> <li>Ail units of me</li> </ul>	sive readings should be casurement are in feet of level is above the screen	and/or gallons unle en, avoid drawdou	ess otherwise in wn of water lev	ndicated vel into the screen	PC= 1	6.611 67,	us Engl		

-		
So	<b>und</b> Earth	
	Strategies	

Soun	<b>d</b> Earth Strategies	OKO	J1 16		ILK I OKO	LAND	SAI	AILFE L	ORIVI		
Client: N	JCPC.	Dr.	nipot t	4. 159	D-CCI						10
Site:									11111	10	
	JP-	Merdel	₩.,	•	Participation of	-	Well	D Numbe	er: <u>MW</u>	77	_
Hela/samp	oling Personnel:	it without				<del></del>					
				_							
Total Dep					Casing Diam	eter (inches)	)	Casin	g Volume	Total	Purge
	(Prior To Purging)	(TD - DTW)	)	1	2	(4)	6	(W	CXCD)		ume
	7.76	V Special process process of the second		0.041	0.16	0.64	1.44	Formula		~5	C
	lity Meter: Type 10 Method: Peristaltic			K#=	3		Date	of Samplin	g: 8/17	/()	
C 1240 C MI 3 C 100 C C C C C C C C C C C C C C C C C	pling Method: Lew	Flow Other:					Time	of Sampling	Mall	ł	
Screened Ir		The state of the s		Sc	 Impling Depth (	annrox the	center	or sampling	(200000)	1.101	
Time Start P	urge: 055)				Time End Purge			n sulurai <del>o</del> a	screen): 7	V10	
Time	Water Level	Rate of Purging	T		Specific	<del> </del>		ved Oxygen	т		
(3-5 min intervals)	(drawdown <0.33°) W. Meter of Bubbler	(Liter/min) 0.1 - 0.5	p⊦	1±0.1	Conductivity  MS/C 1 ± 3%  (UNITS)	Turbidity (NTU)		(mg/L) £ 10% or	Tempera (°C) ± 3		ORP (mV)
0853	7.28	0:15	1	072	0.99	la u		0 mg/L, ± 0.2			
C856	708	6.15	9	133 行	0,99	41.4		0.31	7,9		90
C85°	408	0.15	6.		0,94	35.4		144	8.3		10
0900	7.28	0.15	6.0		0.94	95.5	1	<u> </u>	8.61		6
0905	1.08	0.12	60		6,44	17,4	8,		8,69		14
0908	7,08	6.15	616		0 99	10.9	7,0	03	8,57		95
0911	7.38	0.15	6.		0,99	11.4	子,		5.57	1	S
	A THE STREET STREET, THE STREET				0111	1111	1 11	1-1	8.51	. (	<u>,                                    </u>
	The same of the sa	The state of the s	******	****	151.0	1	-				
		-		***************************************	(yV)				ļ		
						100.00	-		<del> </del>	-	
Sampling Co	omments:								*****		<b>7</b>
	ole Number/ID	Contai	ner Ty	ре	Preservative	Field Filte	ered?		Analysis Rea	niort	
MW03-	7/60/100	DXYEN!	JC A	,	1101	No 0.45	and the same of	N. J. Ati		uesi	
	-	1x seca		Nic	HOSCY	No. 0.45		Tra (4)	101		
. <sup>20</sup>	- 57	1 × (3503)		210	Yes	(No. 0.45		Syllid	·		
	/	3x 2601	RIV	\	***************************************	No 0.45			1 + Nitrole	LIVI	-072-
PURGE WATE	R DISPOSAL NOTES:			7		1		0.0 10110	101 (100	3 - 7 - 1 ,	.1163
Total Discha	rge (1Gal=3.8785Ltr):	~11/4	Dispo	osal Meth	nod: (Drúmme	d Reme	d. Syster	n 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)?  Action Items (e.g.: repair of any monitoring well components)?  Additional Well Condition Comments or Explanation of any Access Issues:											
Description of the Control of the Co						101					
						/					
<ul> <li>All units of me</li> </ul>	ssive readings should be easurement are in feet o r level is above the scree	and/or gallons unie	ess othe	erwise indic	cated into the screen	et1=6	81	sweens (			
FC=	> Wry L	Foat =	3	3.3 m	116	7C = C					
	U			(		D.O. =	0.3	I mylh	C980	2	



with all the state in a	dEarth	GRO	UNDWA	TER PURG	E AND S	SAMPLE F	ORM	
Client:	Strategies NCPC	Pr	olect#: (1)	593-00	l			
Site:	CIFER	_ Sit	te #:	0 (0 00	<u> </u>	Vell ID Numb	Minte	IZ PI
Field/Samp	oling Personnel: 💭	Mondel			v	veli in ivumb	er: <u>/ 10 V C</u>	CN 1 All
								まったこ
Total Dep	th Depth to Wate (Prior To Purging)		200000000000000000000000000000000000000	Casing Diame		593	ng Volume	Total Purge
	7,10		0.04	2	0.64	6 (V	/C X CD)	Volume
<u> </u>		<b>\</b>		-1	0.04	1.44		~ 191
Sampling N	allty Meter: Type the Method: Refistaltic		20 70 100 00000	3_		Date of Samplin	19: D/15	11
Other:								_
	pling Method: Clow	Flow Other:				Time of Samplin	g: 175	5
Screened In Time Start P		MAN 19 MA	S	ampling Depth (a		nter of saturated	d screen): ~	101
Time	Water Level	Rate of Purging		Time End Purge	1001			-
(3-5 min	(drawdown <0.33')	(Liter/min)	pH ± 0.1	Specific Conductivity MS/CM ±3%	Turbidity	Dissolved Oxygen (mg/L)		
intervals)	WL Meter or Bubbler	0.1 - 0.5		(UNITS) ± 3%	(NTU)	± 10% or If <1.00 mg/L, ± 0.2	Temperatu (°C) ±3%	
1408.	7.18	0.1	6.31	1.00	8.0	11.70	8.68	1119
1711	7.18	0.1	6.54	1.09	3.0	9.45	9.64	87
1714	4,30	0'3	6173	1.00	16	8,07	10,69	56
1318	9,00	0.3	6.89	1.00	0.1	7.36	11,29	77
1430	7,30	<u></u>	7.03	1.00	-0,5	7,00	11.48	-0
1733	7.00	03	7.14	1.03	-0,8	6.85	11.58	-24
1776	7,00	0.3	7.77	1,03	-0,9	6.37	11.58	-47
1731	7,20	0.9	7.34	1.63	-0,7	641	11,60	-54
1732	7.30	6,0	7.3899	1,03	-1,0	6.74	11.50	-63
GYF!	(120	00	7,60	1,09	1,6	38.F	10.36	-84
1748	06, F 06, F	0,0	7160	103	-0/3	6,91	11.24	-89
Sampling Co	omments: P.	0.9	7.62	1,63	0:1	6,80	11.51	-93
F-=	omments: Pung: 31	Page 1122	5 se blace be	whicher, c	islandid collin	41 .		
	ole Number/ID	Contail	ner Type	Preservative	Field Filtered	alo I		
WINO4-	20110015	Dx 40 ml		HCI			Analysis Requ	əst
-	)	IX BOUM		HOSCH	(No) 0.45 0		tten	
	M	X (050%)	MI RITU	Yes Yes	-		T-181-0	
	7 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	3 x 5004!			(No 0.45 0			. Nat L
PURGE WATE	R DISPOSAL NOTES:					11 1 100	टा निर्माल	रहेन क्षायान
	ge (1Gal=3.8785Ltr):	~3	Disposal Met	thod: Drummed	Down at 6			
			Disposal IVIET	noa. Quinmed	Remed. S	system Other:		
	ndition Information:							
Well/Security	Devices in good co	ndition? (i.e.: Mo	onument, Bolts	, Seals, J-cap, Lo	ck		Yes	No
	er Infiltration (if yes, d			NO YE	S.	Мб	nument V	Vell Casing
	(e.g.: repair of any r lell Condition Comm						Yes	No
riddineria ri	on condition contin	ierns or Explana	IIOH OLANY AC	cess issues:	BMI			
					/			
	Programme and the second				2	11	() p 1 2 21	; 67
All units of mo	sive readings should be	within the indicate	ed parameter lin	nits prior to sampling	, KEWA W	ill registran	~13 (610	15)
<ul> <li>If static water</li> </ul>	easurement are in feet of level is above the scree	una/or gallons unle en, avoid drawdou	ess otherwise indi	licated	PM= 7.	48		
	2.2.2.2.2.0.000000000000000000000000000	arola alawaoy	or water leve	>	PC = 0	538 rslan		
				0'	NB = -1	i i		
				1	0- 4	(1		
					U - O11	68 mg/L 6	(0.8 0)	

Page _	Of
9	



# 

Client : Site:(	NCPC	Proj	ect # : Site # :	592-001	_	Well ID Number:	MWUF	
Field/Samp	oling Personnel:					Sample Date:	7/15/W	
Water Qua	ality Meter: Type: 났	C6-1112/n	ID: K 教	<sup>2</sup> >		Sample Date:	1755	
Sampling E	quipment: Peristalfic	Bladder Bailer	Other:			Sample Number:		
Purge/Sam	npling Method: Cow F	low Other:						
Screened I	nterval:	Activities the state of the second		Sampling Der	oth (Approx.	center of saturated	screen): a.l	CV
Time Start F	Purge: 1705			Time End Purge	: 160		screen, , ,	.0
Time	Depth to Water	Rate of Purging		Specific	Turbidity	Dissolved Oxygen	l	1
(in 3-5 min intervals)	(drawdown <0.33*) WL'Mefer ) Bubbler	(Liter/min) 0.1 - 0.5	pH ± 0.1	Conductivity	(NTU)	(mg/L) ± 10% or if <1.00 mg/L, ±0.2	Temperature (°C) ± 3%	ORP (mV)
1751	7,30	0.0	7,60	1,63	116	67.3	11.57	-96
1						TO CO	70.11	~ 10
		344						
		200						
to the same of the			14.					
						VS-0W18		
			- 1					
				1				
				Pay				
					1			
					2/5			
			_		- 15	1/2		
						.,		
<del>,</del>						1		
						-		
						·	<del>\</del>	
Sampling Co	omments:	M		territoria de la composição de la compos				
						444		
	La production of the same							
								-

Carre	adla.	1 ( )
Juul	ndEar	UIS
	Strate	aies

	Strategies								•	
	NCPC	P	roject#:	05	92-001				•	
	Caltax		ite #:	-	99-001	_	Well I	) Numbe	r: Mu	113
Field/Samp	oling Personnel:	Mersel			i.	_				(Not Alter)
		Ŧ.		in the second						C144 141101
Total Dep	th Depth to Wate	er Water Co	umn		Casing Diame	eter (inches)		Casino	Volume	Total D.
	(Prior To Purging)	(TD - DTV	v	1	(2)	4	6		(XCD)	Total Purge Volume
Standard No. 19419	TION	******		0.041	0.16	0.64	1.44	Standard Land		NHL
Water Qua	ality Meter: Type	126-20 ·	In a le F	12					5/11	
	Method: Peristaltic			***************************************	_		Date :	of Sampling	0/16	57VI
	pling Method: Łow I	- Plow <sup>3</sup> Other:_	- 1	e e			Time	of Sampling	. 095	6
Screened I			1.7	San	npling Depth (a	pprox, the c	enter of	saturated s	screen):	2101
Time Start F					Time End Purge	1015				2010
Time (3-5 min	Water Level (drawdown <0.331)	Rate of Purging (Liter/min)			Specific Conductivity			ed Oxygen		
intervals)	(WL Meter) or Bubbler	0.1 - 0.5	pH ± 0.	1 6	15611 ±3%	Turbidity (NTU)		mg/L) 10% or	Tempera (°C) ± 3	
18170	-7		<del> </del>		(UNITS)			mg/L, ±0.2	(0)10	(mV)
094	7.01	0.15	6.07		1,19	48.4		05	9.66	
्वपप	7.01	0,15	6.30		0G.1 0G.1	49.4		<b>63</b>	10.18	166
0947	नावा	0.15	6,37		1.00	184.5	81		10,90	- 1
0950	Fici	0:15	6.30		1.00	253.4 04.5	7.9	83	11.08	
0953	80,7	0.15	6.41	`	119	93.3	7.	3:7	11.19	157
						0191.19		24	1111	101
		A								
					-				-	
			<u> </u>		tas					
			<del> </del>	-						
Sampling Co	omments:									
Fr=	1,5 mg/L F	: H = 1.3	SMIL	es:				22		
Samp	ole Number/ID	Conto	iner Type		Preservative	Field Filter	ed?	A	nalysis Rec	ruest
WM 19-	DO 110918	Dx 40N1			11((	No 0.45	0.10		ast	
	Chr.	1 x 5CON		·	THE RESIDENCE OF THE PARTY OF T	(No) 0.45	West feet a second second second	V	-	
	/	1 x (25/2)			YIS			Sulfide		The second second
		151 20	Ul BAN	7—1	Approx. Brown	(No) 0.45	0.10	ver after	+ Nilcal	rs thirips
PURGE WATE	R DISPOSAL NOTES:					E				
Total Discha	rge (1Gal=3.8785Ltr):	~	Disposal	Metho	od. Drammed	Remed	I. System	Other:	7	
					194	•		W. 1.		
	ndition Information:	adition() ( a . 1 4		<b>.</b>			08			
	Devices in good cor er Infiltration (if yes, d		onument, i	Bolts, S		×)			Yes )	No
	(e.g.: repair of any r		compone	ents)?	NO YE	<b>≥</b>		Andrews 1.	ument	Well Casing
Additional V	Vell Condition Comm	ents or Expland	ation of any	/ Acce	ess Issues:				Yes	(NG)
					/	AM				
• Three succes	sive readings should be	within the indica-	ed name	tor IIm#	prior to server	Down	- will	MEGSEVEN	with re	1 Der
<ul> <li>All units of me</li> </ul>	easurement are in feet c	and/or gallons uni	ess otherwise	e indico	ated	Commence of the last second	and the second second	,	-12 (6	1010)
• If static wate	r level is above the scree	en, avoid drawdo	wn of water	level in	to the screen	pt = 6,				
*					35	C = 0,8	63	, 4		
						(b = 17.	5	( e		
E **					DC	) = 1."	Almi.	11_ @13.	100	
					1.0	1.	- 1111	- (0)	1	



	Strategies									
Client:	NICPC	Pr	niect#: Ó	590-021						
	clark	Sit	te #' <		-	144 11 15 1		IA. I	13	
Field/Samo	oling Personnel:	D Mars			_			r: <u>MW</u>		
ricia/odirip	,	V1 623	( )		<del>-</del>	1	Fiel	d Du	6/10	inte
							+ N		17	70
Total Dept	th Depth to Wate	er Water Colu	ımn	Casing Diame	ter (inches)			Volume	To	tol D.
	(Prior To Purging)	WID - DT)	)   1		4	6		XCD)		tal Purge /olume
· Dager	494		0.0		0.64	1.44				44
	11		1. 14		- L					11
Water Qual	lity Meter: Type <u>Kur</u>	160 M	D#_ K +	3		Date of	Sampling	D/16	5/1	И
Sampling M Other:	lethod Pelistallic	Bladder Baile	er							
	oling Method: <tow< td=""><td>Flow Other</td><td></td><td></td><td></td><td></td><td></td><td>にち</td><td>2/</td><td>1300</td></tow<>	Flow Other						にち	2/	1300
Screened In	- 1/EST	TIOW J OINEI.	7	Sampling Donth (c	innray tha s	lime of	Sampling			
Time Start Pi	urge: 1514			Sampling Depth (a			tturatea s	screen);	~ i(	1.5
Time	Water Level	Rate of Purging	<u> </u>	Specific	: KD3	) Dissolved	0			
(3-5 min	(drawdown <0.33')	(Liter/min)	pH ± 0.1	Conductivity	Turbidity	(mg		Tempera	t iro	ODD
intervals)	WL Meter or Bubbler	0.1 - 0.5		M 3(55 ± 3%	(NTU)	± 105		(°C) ±3		ORP (mV)
15i7	NGIF	0.15	1111	(UNITS)	070 =	if <1.00 m				
1291	7.04		6.16	0,490	3300			11.03		83
1504	7,34	0.15	6,34	0,438	0.061	10,0	77	11.39		73
1234	PG17:		6,36	0,449	93.5	9.01		11:33		65
1530	PS.F.	0.15	6,43	0.485	75.1	8,00		1110		55
5386	7.54	0.1		0,488	71.4	7.8		10.88	[	49
1531	7,24	0.1	6.53	0,510	60,0	8,00	2	16.7		37
1545	7,04	011		0,486	40.5	7,41		10.26		37
1545	7,54	0.1	6.54	0,489	38.3	7,30		10,50		07
1548	7.29	011	6.57	0.497	87.4	7.10	A	10,69		704
Via marriage	1.0	C. 1	6124	0:114	30.1	7,0		10:59	5	90
				<del>                                     </del>	The same of	Constitution of the Parish Street, or	<u>Cra</u>	-		
Sampling Co	omments: Clear 1	em- They call	@1518 cl	w & origin par 177	aline Emilian	חרוב לעי ב	10 1519	District 1	1	0 1-1-23
	(4.).			5 (			101	, t 00-1p 21	THE	1730
	le Number/ID		ner Type	Preservative	Field Filter	ed?	A	nalysis Rea	uest	
	30110916	4x 4cmi	400	tici	(No 0.45	0.10 GX				
1MJd	30110316	1 x SCON	YEB	-	(No 0.45	0.10	3DM, 0	RPH	-0	
*****	C. L. clam and the company of the co	Dx 40ml V	to terror more and a second more than the	HCI	(No 0.45	0.10 N.	J- Atter	1.		-
		14x 500ml R		1-40301/3-Nin	(No.) 0.45	0.10 Ni	+ nstfA.t	Nitralis +	· N:}	25/10
LIDOE WATE	R DISPOSAL NOTES:	1x (850?)n	1 Tain	yes	<b>©</b>	Su	Hide			
	ge (1Gal=3.8785Ltr):	N	Disposal M	-4						
- Clai Diochai	ge (10di=0.0700Eii).	70	Disposal M	ethod: (Drummed	Remed	I. System	Other:			
Vell/Site Con	dition Information:									
	Devices in good co	ndition? (i.e.: Ma	nument. Bo	lts Seals I-can Loc	\N		_		1	
	er Infiltration (if yes, d			~	Š)⇒			Yes		No
	(e.g.: repair of any		component	s)?				iument)		Casing
	ell Condition Comm							Yes		No
				,	2					
					77	.11 .	1 -	Carlo	R'I	
Three success	ive readings should be	within the indicate	ed parameter	limits prior to sampling		And in the last of		C-163	ارد.	
	easurement are in feet of level is above the scree				PH= \$	75 G.	48			
siano water	TO VELLO CLOUVE ITHE SCIEN	ər, avola arawdol	vii oi waterle	vei into the screen	pc = 0			1		
= =1	8 11 5	1=+65	6 mull		RP = =					
c = 1	ony L	- 01-	),				la	1		
				,	0.0 =	0.890	10.6.	C		

	6	. 03
Col	ndFarth	
JUU	A R W. T.	
<b>300</b>	ndbarth2 Strategies	

Soun						W 119	11 - belon   1 - V	>IXIVI	8	
	Stratégies		25	2000 1		,				
	NCPC	_ Pro	oject#:	0592-001	_				27 NO. 2000	
Site:		C	e #: <del></del>	The second secon	_	Well II	O Numbe	r. MW:	75	j
Field/Samp	oling Personnel:	Merdel						!!		Jat. AH
									CV	Jey. ATT
Total Dept	th Depth to Wate	er Water Colu	ımn	Casing Diame	eter (inches)		Casino	Volume T	Tot	tal Duras
1	(Prior To Purging)	(TD - DTW)		1 (2)	4	6		(XCD)		tal Purge Volume
17,5	6.16	**************************************	0.	041 0.16	0.64	1.44	+			61
	lity Meter: Type H	1000	100	- + Down wall Out He	.h. Arr	۸.				61
Water Qua	lity Meter: Type_\tag{16}	9000 11-93	D#_K ":	3 For don	in-well buscoid	Date.	of Sampline	.2/1=	1/1	1
Sampling N	1ethod: Perisfaltic	Bladder Baile	er				or carripining		,, ,	1
Other:				855						
	pling Method: (Low	Flow Other:				Time :	of Sampling	154	7	
Screened Ir		15		Sampling Depth (a	approx. the c					7
Time Start P	urge: 1505	. 4		Time End Purge						
Time	Water Level	Rate of Purging		Specific			ed Oxygen			
(3-5 min	(drawdown <0.33') WL Meter or Bubbler	(Liter/min) 0.1 – 0.5	pH ± 0.1	Conductivity	Turbidity		mg/L)	Temperat	ure	ORP
intervals)	WE IMPLET OF BUDDIE!	0.1 - 0.0		(UNITS)	(NTU)		10% or	(°C) ± 3°		(mV)
1500	17 16	(C) 1 E'	100		A	-	mg/L, ± 0.2			()
1504	6118	0.15	693	0,587	20.9	10	, 39	11,47		58
1510	6.19	0.15	6,83	0.595	8,3	71	90	11.98	-	53
1513	6.19	0.15	6,83	0,595	15.1	8,0	17	13,38		46
1516	6.19	0.15	6.84	0,596	7.1	-	87	12,43		40
1519	619	0.15	6.86	0.597	3.0	77,		13,48		
1599	6118 .	WOTTO C		0.599	26	77,				33
153534	6117	0788915	6,97		10,4	7.		11,50	2	38
(52837	618	0.15	6.95					10.30		30
1540				0.598	4,4	6.8		11.30		18
	6118	0:15	6.95	0.598	1,91	6.		11.30	1	17
1543	6.18	0.15	6,95	0.598	1.4	6.8	i l	11.34		15
Manage Assess State Supplement of the	and the second section of the section of the second section of the secti			· V	u			A Labelian Company		
	. 5	1.2 54 00				-	and the second second			
Sampling Co	omments: Proof du	de 1505, 1900	ed stack s	or bimin 8 carpeter	le 1533.					
	118 mg/L	+10+=		5/L						
The second secon	ole Number/ID		ner Type	Preservative	Field Filte	red?	А	nalysis Rea	uest	5-4-7 Live 1
MW25-	-30110015	AND XE	AUV 1	111	(No) 0.45	0.10		Atten		
	_	1 x 500 n	1 Poly	110804	No 0.45	0.10	14.4	MIJOIL		m - Name of the last over the
	7	3 x 500n		1	Ng 0.45	0.10		1014	. 1	LLL
iwi				TO COMPANY OF THE PARTY OF THE	The three or the same of the same of	0.10		+ Nita	7 2 7	SAULINE
175000000000000000000000000000000000000				MATERIAL SECTION AND ADDRESS OF THE PROPERTY AND ADDRESS OF THE PARTY	140 0,40	0.10				-
PURGE WATE	R DISPOSAL NOTES:									
Total Dischar	rge (1Gal=3.8785Ltr):	~1.5	Disposal N	Anthod Dr. Gorna	D	10.				
70101 2201101	90 (1001-0.0700211).	1020	Disposal N	Method: Drummer	Remed	. System	Other:			
Wall/Cita Car	ndition Information.				14				Clare Line	
	ndition Information:							,		
	Devices in good co		onument, Bo	olts, Seals, J-cap, Lo	ck)			Yes_	(	No).
	er Infiltration (if yes, c			NO (YÉ	\$ →		Mor	nument	Well	Casing
	(e.g.: repair of any						-	Yes		(NO)
Additional V	Vell Condition Comm	nents or Explanat	tion of any .	Access Issues:					8	
				1 67	Wen be	17	ila			
		2000000			J. I CL	11 00	10.17			
19.4.,		<del></del>			0 -	e h		1015 7	10	10-1
• Three succes	sive readings should be	within the indicate	ed paramete	er limits prior to sampling	YUUN"	will	HEEBENT	vevs(e	16	15)
	easurement are in feet			Indicated	11- 6	86				
	r level is above the scre			evel into the screen	11=	mar.	e (			
				<'0	C= 0.	541	4) ICM			
		2			0 - 4	2	11			
				OF CAR	نه سا	1 12 1	F.A.			
				DO	月一〇,	58 N	9/10	12,100		
								211		

# Sound Earth Strategies

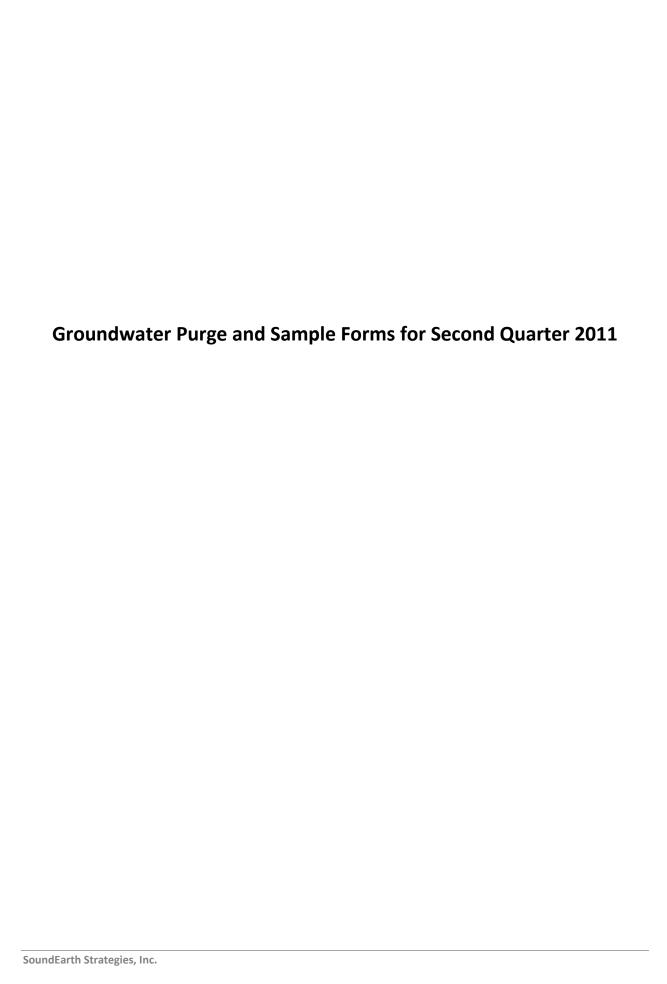
### **GROUNDWATER PURGE AND SAMPLE FORM**

		Pro Site Mendel		05	597-001		<b>%</b> Well ID	Number	MW	96	
			Sales								
Total Depth	Depth to Water (Prior To Purging)	Water Colu (TD - DTW)		1	Casing Diame	ter (inches) 4	6		Volume x CD)		al Purge olume
16.5	1617	And the second of the second		0.041	0.16	0.64	1.44	SELECTION PROPERTY.	minute Col	NS	8L
Sampling Metho Other:	Meter: Type Hundon od: Peristaltic Blo	adder Baile		# 3	<u>S</u>			f Sampling f Sampling			1
	Method: Low Flo				— ampling Depth ( <i>a</i>	innrov the o	Time o	f Sampling:	oroop):	8 8 8	ι
Screened Interv	910	6.5		50	Time End Purge:		enier or	saiuraiea s	creen): e	-10	
Time Start Purge	3 Tom. 12	Rate of Purging			Specific	Palo	Dissolve	ed Oxygen			
(3-5 min (9	drawdown <0.33') . Meter or Bubbler	(Liter/min) 0.1 - 0.5	pH ±	±0.1	Conductivity  MS CM ± 3%  (UNITS)	Turbidity (NTU)	(r ± 1	ng/L) 0% or mg/L, ±0.2	Tempera (°C) ± 3		ORP (mV)
1124 .	1C,F	0.15	6.8	00	1.06	960.0	11.	99	10.6	7	120
109		015	6,5		107	1500	813		10,90	1	59
1130 1		0115	6.6	F	1107	(36,0	719		10.9	8	99
1135		0.15	6.8		1.07	107.0	7.4	9	10.90		9
11389	16.5	0115	618	4	108	81.4	7,6	)6	16,93	3	-96
(IMB)	1617	0115	6.8	5	1108	69.7	7.1	9	10.88	Ŝ	-40
							3				V
Control State of the Control S	CONTRACTOR OF THE PROPERTY OF										
		The second secon			- Um	1					
1						And the second s	-				
									The second second		
	ments: Water 13	switzelly sil	936	dere h	retime of Di	W read op: I as how (N	tholly sea	ull, webs	r was in alter	morus Sista	mot co
	Number/ID	Conta	iner Typ	e	Preservative		seathers received for the	Contract of the Contract of th	Analysis Re	quest	
1M96-9	0110916	1 MODE XE	VUA		1161	(No) 0.45	0.10	A TON	Hen.		
Zos		1 x 520ml	HUM	<b>\</b>	HOSCH	No 0.45	0.10	<u> </u>			
		1 x (050n)		Ty.	705	No 0.45	0.10	Sultie			
- American Control of the Control of		3 x 500r	11 B	M	Contents and position and contents and the same of	No 0.45	0.10	UNT ATT	int Nit	atzs+	Witn
	JODGO AL NIGITO			7			<b>*</b>				
	OISPOSAL NOTES:	4.0	Diana	and Ma	thod: Drummo	d Domo	d. Systen	o Other:			
Total Discharge	(1Gal=3.8785Ltr):	~9	Dispo	osai ivie	ethod: Drumme	u Remed	a. sysieri	i Omer.	-		
Well/Security De Surface Water I Action Items (e	tion Information: evices in good con- nfiltration (if yes, de .g.: repair of any m I Condition Comme	scribe)? nonitoring well	l comp	onents	NO (Y) s)? ccess Issues:	ES )⇒		Mo	Yes nument Yes	Wel we	No I Casir No
					31:	see supply	) MERS	, t on	PSING GO	113	20
	e readings should be v surement are in feet ar					o Down	aull a	ujsim	ws (e	1915	9)
	vel is above the scree		own of w	ater lev	vel into the screen	FC= 8,	751	mskm			

DU = 0,95 e 11.7° C

	(Free W)
Sound	Farth 2
	lalegies

Client:	Strategies	_	Pro	oject	#: <u>0</u> 1	59-cc1			,				
\$0000000000000000000000000000000000000	oling Personnel:		SI Si Mai di	e #: .\	Salt name on pass and Pa	CAPTA CALLED	_	Wel	IID N	umbe	r:CMV	101	<u> </u>
Total Dep			Water Colu			Casing Diam	eter (inch	es)		Casing	Volume	To	ital Purge
	(Prior To Purgir	ng)	(TD - DTW)	)	1	(2)	4	6		(WC	XCD)	١	Volume
	1				0.041		0.64	1,4	4	5		~	41
	ality Meter: Type 1 Method: Peristaltic				(#3			Da	te of Sc	ampling	<u> </u>	7/	! ]
Purge/Sam	pling Method:<	w Flow	Other:			_		Tim	e of So	ımpline	1050		
Screened I	nterval:		* A . May 27 4 7 ***		Sc	ampling Depth (	approx. #	ne center	of satu	urated	screen)	- N	134
Time Start F	Purge: 1034					Time End Purge		193			0010011).	3.0	V
Time (3-5 min intervals)	Water Level (drawdown <0.33° WLMeter for Bubble	)	ate of Purging (Liter/min) 0.1 – 0.5	pl	H±0.1	Specific Conductivity	Turboleli	Diss	olved C (mg/L ± 10% d	-) or	Temperar (°C) ± 3		ORP (mV)
1038	6.99		3 1 5	,e	Ers	(UNITS)	1 2 v		.00 mg/				
1091	6.99	1	3 15		50 78	1118	10.5		3113		7.99		14
1099	6,99		3115		87	118	6.7		0.07		9.84		-11
1097	6.99		0.15		94	(19)	5, 2	<del>-</del>	3,7°	×	10.45		-728 -79
1050	6,99	6,99 0.15 6,98 1.19				13,7		7.93		10,59		-47	
1053	6,00	C	3115	7.	09	1.14	5.0	**	7178		(0,71		-54
With the state of the last state of	topological designation of the second second										Nº III		
				1 1000 - 1000	The same beautiful to								
						12	£						
		+-						100000000000000000000000000000000000000	Name of Street	Contract of the Contract of th			
		+		-			-				All many and an arrange high speed of the	194	
Sampling C	omments:											1	and the same and the same
	ole Number/ID		Contai			Preservative	Field F	iltered?		А	nalysis Rea	uest	
CMM05	FI KUNUG -		) x 40'm1	41-	the best of the same of the sa	Hei	(No 0.	45 0.10	N.	-	rstfe		
	7	_   \	x Scont			HIDSOM	Ø\$ 0.		1	W	211	-	
·····	- Jan	- 1	Y (3X6)		ital	705	(No 0.		Su	Fra			
			x 500 m	0,1	Luj	Taraban Carana C	(No) 0.	45 0.10	NA	Afla	it it was	5 +1	catistic
	R DISPOSAL NOTES		~ \	Disn	osal Mot	nod: (Drumme	d Don	a = d 0 . l					
Well/Site Co	ndition Information  / Devices in good o	: condit	ion? (i.e.: Mc			Seals, J-cap, Lo	ock)	ned, Syste	em O	ther:	Yes		No
	er Infiltration (if yes, s (e.g.: repair of an						E\$ ⇒			Mor	nument	Well	Casing
Additional V	Vell Condition Com	ment	s or Explanat	comp	onents);	Oct less soot				8	Yes	<	No >
Traly Z	hes lock and	Not	A. 63 c	الماءة	Clarit	irdand	-21						
Usoch names	or 144 300, ca	Died 1	FELLER	(2-11-2)	Lu Velor	ichtar!							
Three succes All units of m If static water	easurement are in fee or level is above the so	be with et and/ ereen, c	nin the indicate for gallons unle avoid drawdov	ed pard ess other vn of v	erwise indk vater level	into the screen	et =	0.93	7 ns	kn.	(e 1130	3)	
							moretin colli	Andrews St.	V				



### Sound mile

				General	Info						
Client:	McGG			Project #:	590						
Site Name/#:	Colfix		Field/Samplin	g Personnel:	. Mendel	Well ID N	umber: 📉	CON			
				Well Det	ails						
T-4-1 D-141		to Water (DTW)	Water Column (	(WC)		Diameter		Casing Volume			
Total Depth		iately Prior to Purging)	=TD-DTW	0.75"	Volume Conversion Factor (VC) =WCx						
90-5 Fee	et BTOC 5	Feet BTOC	14.5°1 Fe	et BTOC 0.023	0.041	0.17 0.65	1.44	48 malle			
	. C	to 00.5		Screen Subm	ONO =	Place tubing intake 2 t	o 3 feet below dent	h to water			
reened interva		_ to	Feet bgs		YES =	Place tubing intake at	approximate center	of screen			
				Equipme							
	Peristaltic 🗆		Owner/ID#:_	KANSC	Water Quality Me	ter Brand/Model: YS	+DRTISC O	wner/ID#: Kran			
ater Level Instr	ument:   B.W.L.M	eter 🗆 Bubbler	☐ Interface ☐	Other:	Owner	/ID#: 5E	5				
				Samplin	ng						
pth of Tubing I	ntake: ~ 13	Feet BTOC	Time Start	Purge:	9.7						
and the same of th			T								
	Water Level	Purge Rate		Specifi Conductiv		Dissolved Oxygen (mg/L)					
Time (feet) (3-5 min intervals) drawdown <0.33		(L/min) feet 0.1 – 0.5	pH <sup>1</sup> ± 0.1	UNITS: M	( <u>·</u> If ≥10, ±109	6 If≥1.00, ± 10%	Temperature	ORP			
129	5.93	0.0	6,63	± 3%	if <10, stabiliz		(ºC)	(mV)			
139	5.93	0,7	6.48	0.53		16.99	19.97	90.6			
135	5.93	6.0	6.60	0,540		94.55	12.65	83,3			
38	5.93	0.2	6.43	0,53		19.97	1399	81.2			
41	5.93	0.2	6,42	0,59		13,80	13,30	84.9			
144	5.93	013	6,40	0,500		18,76	19.50	89,0			
1147	5,93	0,0	6.40	Minimum # of Res	dings		т — — —				
150	5.93	0.2	6,40	0.51		19.81	19.36	97.9			
153	5,93	0,0	6,39	<u>0,515</u> 0,514	09,3	27,80	13,64	100 7			
			.01371	0.311	0016	10,66	13,69	104.7			
		The state of the s	and the same of th					<del> </del>			
							<del> </del>				
nple Date: 🚅		Sample T		Field Du	plicate Sample Time:	And the second s	Time Sampling End	ad: 100-7			
mpling Comme	nts: Flow the	n (ill empired e	1134 day to a	which cure with	white : stabilize	d w/o Do ski	w keeben cabaa	ed: 1207			
H Iburiu	ydalab mas	nol: Temp=	10.86 €	Sp C = 6.	5338 nskn	DO=1.73		RP=108			
	· · · · · · · · · · · · · · · · · · ·	· ·		Analytica	ıl .		-	11/1 - 100			
<del></del>	lumber/ID		niner Type	Preservative	Field Filtere	45	Analysis Requ	est			
08 - CUL	aczia	Dx4Cm1	16,4	Hei -	(No) 0.45	0.10 MNA	1				
	Albania (Million Carago Million Million ) and on	(x Stal	(Silvy)	410861	No 0.45	0.10		- The section of the			
	Strains South House to will the	1x 20001	CALLED THE REAL PROPERTY AND ADDRESS OF THE PARTY AND ADDRESS OF THE PA	~ \	(No) 0.45	0.10	dennes of the second se				
			mi ienz	ZNAC	No 0.45	0.10		Control of the Contro			
The same of the sa	The second secon	m	Charles and the	TO SEE AN ADDRESS OF THE SEE AND SEEDS OF THE SEEDS OF TH	No 0.45	0.10		AND THE PERSON NAMED IN COLUMN			
		1	7	Purge Wat		0.10					
en? □ NO	☐ YES Odor?	ØNO □ YES	⇒ Describe:	or viat		Color (describe)					
	Gal = 3.88 liter):	415	gallons	Disposal Me	ethod: 🛛 Drummer	Color (describe):	W-V				
al Discharged (1				Well Conditi		- remediation syste	Other:				
ıl Discharged (1				AAGU COUGIT	IUI						
	ces in good condi	tion (i.e.: Monumen	t. Bolts Seals Lean		ff vec						
II/Security Devi		tion (i.e.: Monumen		, Lock)?	ELYES □ NO =	⇒ Describe:					
II/Security Devi	nt?	II NO □YE	S 👄 Describe	, Lock)?		⇒ Describe:					
I/Security Devi	nt?	2	S 👄 Describe	, Lock)?	ELYES   NO =	⇒ Describe:					

				General	Info						
Client:				Project #: 💍							
Site Name/#:	Cilax		Field/Sampling	Personnel: 🔎	Men	del	Well ID Nu	ımber: $ extit{MV}$	N03		
				Well De	tails						
Tutal Danish (			Vater Column (V	VC)		Casing Dian			Casing Volume		
Total Depth (	1.0	y Prior to Purging)	=TD-DTW	0.75		Volume Conversion			=WCxVC		
€0.5 Fee	et BTOC 6	Feet BTOC	.33 Fee	BTOC 0.023		0.041 0.17	0.65	1.44	31		
Canada da Indonesia		00.5 Fee	t bgs	Screen Sub	merged?	ØNO ⇒Plac	e tubing intake 2 to	3 feet below denth	gallons to water		
Screened Interva		- CO Fee	t bgs			☐ YES ⇒ Plac	e tubing intake at a	pproximate center	of screen		
L				Equipm							
	Peristaltic Oth	_		Lyanse	Wat	er Quality Meter B	Brand/Model: Hych	DRT15COV	vner/ID#: Karnic		
Water Level Instri	ument: DWL Meter	r 🗆 Bubbler 🔲	Interface 🗆 C	Other:		Owner/ID#	SC3				
				Sampli							
Depth of Tubing I	ntake: $\sim$ Fee	et BTOC	Time Start P	urge:	309						
Time	(3-5 min intervals) drawdown < 0.33 feet										
(3-5 min intervals)	Grawdown 20.33 reet	0.1-0.5	± 0.1	0.85		if <10, stabilized	if ≤1.00, ± 0.2	(aC)	(mV)		
1315	6.18	0.15		0.846		37.2	3 29	16.19	-18		
13(8	6.18	0115		0.85		3318	0.70	15,49	-38		
1301	6.18	0.15		0,85		93.4	0.55	15,39	~5C		
1394	6,18	0.15		0.84		18,3	6,50 6,48	15.31	-58		
1337	6.18	0,15		0.84		17.7	6.45	15.07	-70		
1330	210	0.15		Minimum # of R		17 =					
1000	6.18	C(S		0.548		16:7	C,44	15.18	-79		
	and the same of th	****									
								W 0 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10			
				277 100	m						
Sample Date:		Sample Time:				Sample Time:		ime Sampling Ende	ed: 1359		
Sampling Comme	nts: Day-will	mersuad Tom	o= 10,10 %	Spi = 0.8	718 -	Slim Do=		L ORP=-			
ptl >	reasoned w/c	Junta = 6,3	30	,					140		
				Analytic	:al						
Sample 1 Muic 3 - Di	Number/ID	Container	1	Preservative	1	Field Filtered?		Analysis Reque	est		
2000 - 1000 N	0110219			Mil	No		0.10 MNA	-	Methodological and a second and		
	NATIONAL DESCRIPTION OF THE PROPERTY OF THE PR	1 x 50 41 (21)		HORY	(No)		0.10				
	)	(x 20012) m	TEIN	ZNAC	No		0.10				
•		+1 = 1/0i -	1019	ONITC	độc độc để		N	1 - 4	· · · · · · · · · · · · · · · · · · ·		
the second				-	No-		10 Field nea	and pH	The way		
				Purge Wa	ter						
Sheen? ⊠NO	☐ YES Odor?	MNO □ YES =>	Describe:			Cole	or (describe): Cia	rov			
Total Discharged (1	LGal = 3.88 liter):	~1,35 ga	llons	Disposal N	/lethod:	☑ Drummed □	Remediation Syste	m 🗆 Other:			
				Well Cond							
Well/Security Devi	ices in good condition	n (i.e.: Monument, Bo	lts, Seals, J-cap,	Lock)?	YES YES	□ NO ⇔D	Pescribe:				
Water in Monume	nt?	BINO □YES	⇒ Describe	<u></u>	•	2000 SENSON			- /		
Additional Well Co	ondition Comments o	or Explanation of any	Access Issues:	-	m						
1				/	And the second						
'At minimum, pH, spe	citic conductivity, and di	ssolved oxygen and/or to	urbidity must stabi	lize within the limit	(indicated	l in <i>italics</i> ) for three su	accessive readings prior	to sampling.	-		

### Saund

				G	eneral Info	2001						
Client:			. 11 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	Project #	059	)			*			
Site Name/#:	COLTAX		Field/Sampling	Personne	: DM	indel		Well ID N	umber:	N	NO7	
				W	ell Details				-			
Total Depth		Water (DTW) Prior to Purging)	Water Column (\ ≠TD-DTW	NC)			ing Diam			C	Casing Volum	
00	1 01	1			0.75"	1"	nversion 2"	Factor (VC)	6"		≠WC x VC	
Fee Fee	et BTOC 6.96	Feet BTOC	13,04 Fee	t BTOC	0.023	0.041	0.17	0.65	1.44	8.4		gallons
Screened Interva	l: 5 to	90 F	eet bgs	Scre	en Submerged?	NO E	⇒ Plac	e tubing intake 2 t	o 3 feet belo	w depth	to water	Ballons
				F	quipment	L (L)	- Flat	e tubing intake at	approximate	center o	f screen	
Pump Method:	Peristaltic Other	er:	Owner/ID#:	Kansa		ter Quality	Meter R	rand/Model:	1-1-1 + ORT	1150-	1	/
Water Level Instr	ument: ÞWL Meter	☐ Bubbler [		Other:		Ow	ner/ID#:	rand/Model: Flyo	Molab		ner/ID#:	-landi-c
				9	ampling							
Depth of Tubing I	ntake: $\sim$ $10$ Fee	t BTOC	Time Start I	ourge:	1411							
					Specific	Turbid	ity <sup>1</sup>	Dissolved Oxygen <sup>1</sup>	T		Γ	
Time	Water Level (feet)	Purge Rate (L/min)	pH <sup>2</sup>	UNI	TS: MS/CM	(NTU If ≥10, ±		(mg/L)				
(3-5 min intervals)	drawdown <0.33 feet	0.1-0.5	± 0.1		± 3%	if <10, sta	bilized	If ≥1.00, ± 10% If ≤1.00, ± 0.2	Temper (ºC		ORF (mV	
1416	7.00	6:0			,8173	06.5		0.87	1816	3	-uc	
1419	7.01	0.9	-		18499	04.		0,49	16.1	1	-125	
1433	7101	0.7			8573	03. 64.		0.41	15.9		-199	
1435	7,00	6.5			8535	01.1		0.37	15.6		-130	)
1498	7.02	6.0			3595	06.0		0.33	15.8	8	-181	1
Name of the last the local date of the last the				Minir	num # of Readings	-001		0100	10.6	3	-13	1
		The state of the s		-								
				6	~1							
										-+		
									<del>                                     </del>			-
Sample Date:	= /1er /1A	Sample Tim	e: 1430									
Sampling Commo	nts: Down-will	Sample IIII	e: 100	> < < <	Field Duplicate	Sample Tin	ne:		Time Sampli		-	
Sampling Comme	Out	with the stand	W= 7.04	<u> </u>	- 01 000 l	אטונא	W=	0.50 mg/	LORP	=-1'	7 /	1/
			Car 110	Ai	nalytical							
	lumber/ID	Contain	er Type	Preserv	vative .	Field Filte	ered?		Analysi	is Reques	•	
4- LONW	0010518	CONTRACTOR OF THE PERSON NAMED IN COLUMN 2	101	He		0.45	0.	10 MNA	-	3 neques		
	ang pro- 1974); at any ang proper september of contract contracts	1 x sacre	Ry	HOS			0.	10	TOTAL SUBSTITUTE IN			
	/	1 x 200/21	1373	A	- No			10			100 M	
		tleiplac	1 1204	BNA	CNO			10	*************************			
		115600	0-07	-	. No		0.:	L'ETA -	naaswiel	pH		
				Pur	ge Water	V. 13		-		-	the same of the sa	
Sheen? ANO		ØNO □ YES =	Describe:				Colo	r (describe):				
Total Discharged (1	Gal = 3.88 liter):	26112	gallons	Dis	posal Method:	Ç <b>Î</b> Drumm	ned 🗆	Remediation Syste	em 🗆 Othe			
				Well	Condition							
Well/Security Devi	ces in good condition	(i.e.: Monument,	Bolts, Seals, J-cap,	Lock)?	ES YES	S 🗆 NO	□⇒De	escribe:				
Water in Monume			□ Describe		Gelow T	CC						
Additional Well Co	ndition Comments o	Explanation of ar	ny Access Issues:		W							
1At minimum nH sne	ific conductivity, and dis	solved oxygen and for	turhidity must state	lian vieleius ori	- !- 5- / "					700		
	cific conductivity, and dis	CO.TEG ONYBEIT BIRD/O	torbroity must stabl	iize witnin th	ie iimits (indicate	a in <i>italics</i> ) for	r three suc	ccessive readings prior	to sampling.		1	

	12.03			General Info				
Client:			V	oject #: <u>059</u>				0
Site Name/#:	Colfrie		Field/Sampling Per		erdel	Well ID No	ımber: _ M\	m19
				Well Details				
Total Depth (		Water (DTW) y Prior to Purging)	Water Column (WC)	-	Casing Dia Volume Conversion			Casing Volume
15 Fee	190		Feet BT	0.75"	1" (2"	4"	6"	=WCxVC
Fee	et BTOC	Feet BTOC	) ( \ Feet BT	OC 0.023	0.041 0.17			38 gallor
Screened Interva	l: <u>5</u> t	o <u>15</u> Fee	et bgs	Screen Submerge	d? ☐ YES ⇒ Pla	ace tubing intake 2 to ace tubing intake at a	3 feet below depth pproximate center	to water of screen
	· · · · · · · · · · · · · · · · · · ·			Equipment				
1.00	Peristaltic DOth	ner: _ r 🛘 Bubbler 🗖	Owner/ID#:     K(		Vater Quality Meter			vner/ID#: Krans
Water Level III3a		. Boubble, El	interiace Li Othe		Owner/ID	#: <u>505</u>		
Depth of Tubing I	ntake:~  () Fe	et BTOC	Time Start Purge	Sampling e: \\ D				
Departor rabing r	T	1	Time Start Purgi	1 6/2	<u> </u>			
Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH² ± 0.1	Specific Conductivity UNITS: 15 15 15 15 15 15 15 15 15 15 15 15 15	Turbidity <sup>1</sup> (NTU)  If $\geq 10$ , $\pm 10\%$ if <10, stabilized	Dissolved Oxygen¹ (mg/L) If ≥1.00, ± 10%	Temperature	ORP
1129	6,90	0.15	1	0.9579	09.2	if ≤1.00, ± 0.2	D3:41	(mV)
CSII	6.90	0.15		@i.005	13:1	689	16.70	83
1135	6,90	0.15		1.090	17,4	0.61	16,48	86
1/38	6.901	0.15		第1.085	14.4	0.53	16.12	88
1191	6.91	0.15		1.036	14.9	6.47	16.06	8-01
1149	6.91	0.15		Minimum # of Readings	19,4	0.50	16.13	5-8
1147	6.91	0.15		1.043	25:7	6.49	15,96	80
1150	6.91	0.15		1.649	97.3	61.66	16,37	60
[153	6.91	0.15		1.037	29.0	0,44	16.36	36
1156	cieu	0.15		1,046	31.6	0,43	15.78	99
1159	6.91	0.115		1,048	19.1	6.52	15.95	19
1905	6.91	0115		1,047	18.0	6,44	15,85	15
	18/N		1908	1,049	17.66	0.40	16.95	10
		ogsved: Togo	1361 9556	Field Duplica	ite Sample Time:		ime Sampling Ende	-
endred buch	pidity flow the	n c 1148	Marin Da	rd of Dung	- TO	of The Old	119	Via
			The second	Analytical				
	Number/ID	Containe	Туре	Preservative	Field Filtered?		Analysis Reque	oct
10 - 81MM	cu0518		UA	HCI C	0.45	0.10 UNA	, and your module	
		THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	the second second second	110-1		0.10		artistani, a nel magnetico della collectica di marti, della di ma
1,	IN CONTRACTOR AND ADMITS AND THE PROPERTY OF THE PARTY OF		- 2/5			0.10		The state of the s
<u> </u>	e allegal askimulaski ing aurior w il dispublik . aprior		My 2	The second second		0.10		
The state of the s	×	+ 1 zipla bay		the same party and a second second second		0.10 Field mi	issurel poll	
				Purge Water	0.43	0.10		
Sheen? 🗷 NO	☐YES Odor? /	DNO □ YES -	Describe:	J	Co	olor (describe):	Vot	
Fotal Discharged (1	LGal = 3.88 liter):	$\sim 1.5$ ga	llons	Disposal Metho	d: K Drummed [			
				Well Condition				
Well/Security Devi	ices in good condition	n (i.e.: Monument, Bo				Describe: Bol 3/	whys stripe	(c)
Water in Monume			⇒ Describe:	Below	TOC		0	
Additional Well Co	ondition Comments of	or Explanation of any	Access Issues:		In			
At minimum, nH sne	cific conductivity, and di	issolved ovveen and/or+	urbidity must reabilis	within the limit of the	4-4:- 2-1-15			
	conductivity, and the	issolved oxygen and/or t	or ordity most stabilize v	within the limits (indica	ated in <i>italics</i> ) for three	successive readings prior	to sampling.	

				Genera					
Client:	NOPE		-	Genera Project #: (	11nto				
Site Name/#:			Field/Sampling		D Meray		Mall ID No		11.112
,	COL		ricid/Sampling				vveii ib ivi	ımper: 🔐	MW13
				Well De					
Total Depth (		Water (DTW) Prior to Purging)	Water Column (V =TD-DTW	vc)		ising Diameter onversion Fac		Casing Volume	
19 5			19,94	0.75	" 1"	2"	4"	6"	=WC x VC
19,5 Fee	et BTOC	Feet BTOC	Fee Fee	t BTOC 0.02		0.17	0.65	1.44	.08 gallon
Screened Interva	l: <u>5</u> t	19.5	eet bgs	Screen Sub	merged?	➡ Place tul ➡ Place tu	bing intake 2 to bing intake at a	3 feet below de pproximate cen	oth to water
				Equipm					
	Reristaltic □ Oth	- Carrier	Owner/ID#:	Krouse	Water Quality	Meter Brand	/Model: Had	146+237150	Owner/ID#: Kikuy
Water Level Instri	ument: DWL Mete	r □ Bubbler	☐ Interface ☐ C	Other:	Ov	vner/ID#:	25		
				Sampl	ing				
Depth of Tubing I	ntake: ~ 10 🔀 Fee	et BTOC	Time Start P	urge:	933				
	I .	Υ	T -						
	Water Level	Purge Rate		Speci Conduct			ssolved Oxygen <sup>1</sup>		
Time	(feet)	(L/min)	pH <sup>2</sup>	UNITS:			(mg/L) f ≥1.00, ± 10%	Temperature	000
(3-5 min intervals)	drawdown <0.33 feet	0.1-0.5	± 0.1	± 39	-	abilized	if ≤1.00, ± 0.2	(ºC)	ORP (mV)
0938	7.36	0.15		J.550		18	1601	16.65	109
0941	7.06	0.15		0.569			3.60	15.59	59
0944	7,06	0.13		0.585			3,56	14.36	50
0997	7.76	0.15	-	0.58			.60	14.95	47
2420	7,26	0.15		0.588			.56	14.17	46
2755	7,76	0.15		0.572		5	5,56	14.96	गंठ
0956	7.26	0.15		Minimum # of R		8 6			
0959	7,06	0.15		0.593			53	14,49	41
600	7.86	0.15		0,595			146 49	14.40	41
1005	7,36	0.15		0.595			,53	14.35	40
1008	TIPL	0.15		0.59			151	14.53	40
					hu	-	101	14,60	38
Sample Date:	5/18/11	Sample Tin	ne: 1010	Field I	Ouplicate Sample Ti	ma. 112			10110
	nts: Redaral 5-pi		~: 1030	17610	ouplicate Sample II	me: <u>[[]3</u>	T	ime Sampling E	
2000 = 0011	Maiasty man	Tolone	17386	= 6.5978	Ci Da - n	C-11	1. 5	Princas	und w/QioJa=C,
1 500	1 1000000	12 - 101415	19100 C 201	Analytic	4211-1 DO= (	), 67 M	JL OK	=36	N
Sample N	Number/ID	Contair	ner Type				<del></del>		
w+3-240		3x 40ml	VC A	Preservative	(No) 0.4		D.T.	Analysis Re	
1W19- 2010		1 x SCUNI	A6-B	1101	(No ) 0.4!			X +MTBE	No. of Concession, Name of Street, Orange of Str
1013- Sc110			VCA	HLI	No 0.4		DRCH+(	UKPF	for FD
1	313	LASCUNI	Ry	LOSCH .	No' 0.45		MNA		
	an ang ang and ang alam and anguage ay May ang Angaga and Andrewski . And the sec	3,5cent	Rid	Masci	No 0.45		+	-	The same of Females and State of State
Jr.		1 x 20x(?) N	000	ZnAc	No 0.45		+1)		allestings and the state of the
	-+	Zidac of	H90 )	Purge Wa		, 0.10	<b>P</b> C 1-1		
neen? 🗵 NO		BNO DYES		1 MEE AND				easived of	
otal Discharged (1			gallons	Disposal &	Mathod: 67 5	_ Color (de	scribe): Om	gran cloud	63
			6-110113		Method: 🎜 Drum	mea ⊔ Rem	ediation System	m Other: _	-
				Well Condi	ition				
	ces in good condition			(		O <b>⇒</b> Descri	be:		
ater in Monumer			⇒ Describe:	pe	low TCC				
iditional Well Co	ndition Comments o	r Explanation of a	ny Access Issues:		71				
				1					

<sup>&</sup>lt;sup>2</sup>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.

				General	Info	11							
Client:	NCGS			Project #:	592								
Site Name/#:	Coltax		Field/Sampling	Personnel:	. Mend	ul	Well ID Nu	Well ID Number: MW85					
				Well Det	ails								
Total Depth (		Water (DTW) by Prior to Purging)	Water Column (\	vc)		Casing Diar			Casing Volume				
			=TD-DTW	0.75"	Vo 1"	lume Conversio	n Factor (VC)		=WCxVC				
(7,5 Fee	et BTOC	Feet BTOC	11,45 Fee	t BTOC 0.023	0.04			1.44	95				
Screened Interva	ı: <u>5                                    </u>	o 17.5 F	eet bgs	Screen Subn	nerged?	YES ⇒Pla	ce tubing intake 2 to ce tubing intake at a	3 feet helow dent	gallons h to water of screen				
<u> </u>				Equipme	ent								
MICHAEL CONTRACTOR MICHAEL CONTRACTOR CONTRA	☑ Peristaltic ☐ Oth	·		Canac	Water	Quality Meter I	Brand/Model: 451	+ DR1156 0	wner/ID#: Whoise				
Water Level Instr	ument: 🗗 WL Mete	r 🗆 Bubbler I	Interface 🗆 (	Other:		Owner/ID #	#: SCS	>					
				Samplir	ng	8							
Depth of Tubing I	Intake: ~ 9 Fe	et BTOC	Time Start F	urge: <u>O</u> q	37								
Time	Water Level (feet)	Purge Rate (L/min)	pH¹	Specifi Conduction	vity <sup>1</sup>	Turbidity¹ (NTU)  If ≥10, ±10%	Dissolved Oxygen <sup>1</sup> (mg/L)	_					
(3-5 min intervals)	drawdown <0.33 feet		± 0.1	± 3%	j j	f <10, stabilized	If ≥1.00, ± 10% If ≤1.00, ± 0.2	Temperature (ºC)	ORP (mV)				
0953	6.06	0.3	6,63	60.70		25.1	1.03	13,60	-0.4				
0959	6,06	- ^	7.09	0.700		13.9	1.07	13,76	-6.1				
1003	6.07	6.0	6.63	0,00		23,3	.13:49	13,49	-5.3				
1005	6.07	0.9	6,63	0.70		90.7 ·	0,50	13,60	- 5, 8				
1008	6,07	0.2	6,63	0.703		03.3	1.18	13.59	-9.0				
		1		Minimum # of Rea	adings		1.08	i3.65	-10.5				
ion	6.07	6.0	6.63	0.703	<i>&gt;</i> (	1913	1.95	13.63	-10,7				
1014	6107	0.9	6.63	0.703		1001	1.9M	13, 68	-11.6				
1017	6,07	0.0	6.63	0.703	0	0, 3	1.97	13.96	-19,7				
AT A SHAPE MANUAL PROPERTY.	And the same acceptance designation of the Constitution	• • • • • • • • • • • • • • • • • • • •											
				12.1									
					the residence of the latest section of	The state of the s	as constant to constant						
Sample Date:	5/19/11	Sample Tim	ne: 1000	Field D	Inlicate Sau	nnie Timer	And the second s		No are you are properly and has appropriately the party of the party o				
Sampling Comme	nts: Johnly Pan	15 -145I - nt	displaying delay	who ame ICY	1946	some deresti		ime Sampling End	ed: 131				
lydelal Deun	well execusives	: Temp=  30	1 0C SIC=	-C.768 m5/	200	= 263		emphrale D'					
		*		Analytica	-	0,0	1010 / C.11	1 - 4/	nV				
	Number/ID		er Type	Preservative	F	ield Filtered?		Analysis Requ	ect				
MW35- 30	10519	7×40ml	WA	HCI	No	0.45 (	D.10 MNA	, marysis nequ	est				
		1 x 500-1	BILY	Hascy	(No	0.45	0.10	THE RESERVE OF THE PERSON OF T					
	THE PERSON NAMED IN COLUMN TO PE	Dx 50001	1519	A	(No)		0.10		Chair Congress and Market Section of the Section of				
	rypagoglogista tarangan dan pananagan da mananagan da mananagan da mananagan da mananagan da mananagan da mana	1x xciP)n	1 (25)	ZNAC	No		0.10		The second secon				
		A Control of the Cont			No		0.10						
		L		Purge Wat	No	0.45 0	0.10	Market of the Control					
Sheen? Si NO	☐ YES Odor?	ĎNO □ YES=	⇒ Describe:	ruige wat	<u></u>	<u> </u>		5 / 1 /					
Total Discharged (1		11172	gallons	Disposal M	ethod: IX	Drummod D	or (describe):	J. los of yellin	10 luge personalis				
						Coloniniea D	Remediation Syster	n 📙 Other:					
Well/Security Devi	ices in good condition	n (i.e.: Monument	Bolts Seals Loan	Well Condit		The second		10 11/2					
Water in Monume			Describe:	and a contract • contract		ZNO ⇒C	Describe: Daller	Gelt wity					
	ondition Comments o			belo	w Tol								
					W								

<sup>&</sup>lt;sup>1</sup>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.

### Soundanille

				Genera	Info			· · · · · · · · · · · · · · · · · · ·			
Client:				Project #:(						. 0	
Site Name/#:	Colfax		Field/Sampling F	ersonnel: 🔼	Mere	<u>41</u>	N	ell ID Nu	ımber: _ M	W96	
ļ				Well De	tails						
		Water (DTW) \ y Prior to Purging)	Water Column (W =TD-DTW	c)	Casing Diame Volume Conversion I						
18.5 Feet BTOC 6.91		1	1.56 Feet	0.75" 1" 2"			2"\	4"	6"	=WCx VC	
		receptoe	Feet	BTOC 0.023		C	.17)	0.65	1.44	, 9   gallor	
Screened Interva	1: <u>5 ,5                                  </u>	o 18,5 Fee	t bgs	Screen Sub	merged?	□ YES ⇒	Place tubir Place tubir	ng intake 2 to ng intake at a	3 feet below dep pproximate center	oth to water	
				Equipm	ent					or ou screen	
Pump Method:	Peristaltic □ Oth	ner:	Owner/ID#: K	zvisc	Wa	ter Quality Met	er Brand/N	Model: Hwy	UGG SPATISC	Owner/ID#: Kraus	
Water Level Instr	ument: KWL Mete	r 🗆 Bubbler 🗆	Interface 🗆 O	her:		Owner/	ID#:	SE'S		When the factor	
				Sampli	ng						
Depth of Tubing I	ntake: ~10 ' Fè	et BTOC	Time Start Pu	rge:	215		10000 EUR 10000	•			
Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	рН³	Speci Conduct UNITS!	ivity <sup>1</sup>	Turbidity¹ (NTU) If ≥10, ±10%	lf≥	olved Oxygen <sup>1</sup> (mg/L) :1.00, ± 10%	Temperature	ORP	
1219	6,95	0.1-0.3	± 0.1	0.790		if <10, stabilize	7-	£1.00, ± 0.2	(aC)	(mV)	
1999	6.96	0:1		3.813		161.6		50 61	34.97	~63 ~85	
1995	6.96	0.1		0,819		153.3		51	19.65	-107	
8661	6.97	04		0.830	6	13810		45	19.80	-113	
1381	697	0.1		0,038		12913		43	19.48	-115	
1934	697	0.\		G 855 Minimum # of R		124.0	, O1	57	17.31	-100	
1237	6.77	011		0,841		113:6	G.	56	17.50	-113	
1940	6,97	0.1		0.843		10911		47	16,85	-115	
1243	6,97	0.15		0,839		98.5	Cir	15	16.45	-116	
1946	6.97	0.15		0,85		90.3		43	15.97	1-117	
1249	6,97	0.15		0.858		80.9		19	14.81	-117	
1922	6.97	0.15		0,856		70,2 63,2	0,0		14.55	-119	
Sample Date:	1701	Sample Time:	1316	51-1-1-5			6.5		15.58	1-119	
Sampling Comme	nts: Downwell N	revenes : Temper	=10.78 %	Sec = 0.84	18 -5	Low TV =	BUIL	11 05	ime Sampling En	ded: 1344	
Separed tw	only is well pr	for to parally	du to dirt	iness of old	1/16,00	of reducal	1 -3-	My/L CI	11-100	JON DOLLAR	
	J ,	1 0 0		Analytic	al '	)/ - (		: S	of hearing	11 yum p oc 1.1	
Sample Number/ID			Container Type		Preservative		?		Analysis Req	uest	
MW86- 20	00517	AND DESCRIPTION OF STREET, SAME AND DESCRIPTION OF STREET, SAME	5-B	HC I	No	The Party of the P			(+ MIBE +	MNA	
	THE PERSON NAMED AND THE PERSO	The second secon	ily		No	-		DEPH +O			
and the state of t			nu -	HOZCY	No			Field pt	1	and the state of t	
3	e de la companya del companya de la companya de la companya del companya de la co			110~1	No		0.10	ANA	-	werten transmit bler stern bemoonspeers between bestern bester	
V		and the same of th	Rolly	ZNAC	No	) 0.45		ANM			
				Purge Wa	ter			- F			
Sheen? ☑ NO		☑ NO ☐ YES =>	Describe:				Color (desc	ribe): Clos	dy Gray/B	12W1	
Total Discharged (1	Gal = 3.88 liter):	~1,5 gal	llons	Disposal N	lethod:	☑ Drummed	☐ Remed	diation System	m Other:		
				Well Condi	tion						
		n (i.e.: Monument, Bo			☐ YES	. 1	⇒ Describe	: No b	13	· .	
Water in Monume			Describe:		dow	TOC					
Additional Well Co	numents o	or Explanation of any	Access Issues:		J-V)	-					
<sup>1</sup> At minimum, pH, spec	ific conductivity, and di	ssolved oxygen and/or to	urbidity must stabiliz	e within the limits	(indicated	d in italics) for thre	ee successive	readings prior	to sampling		



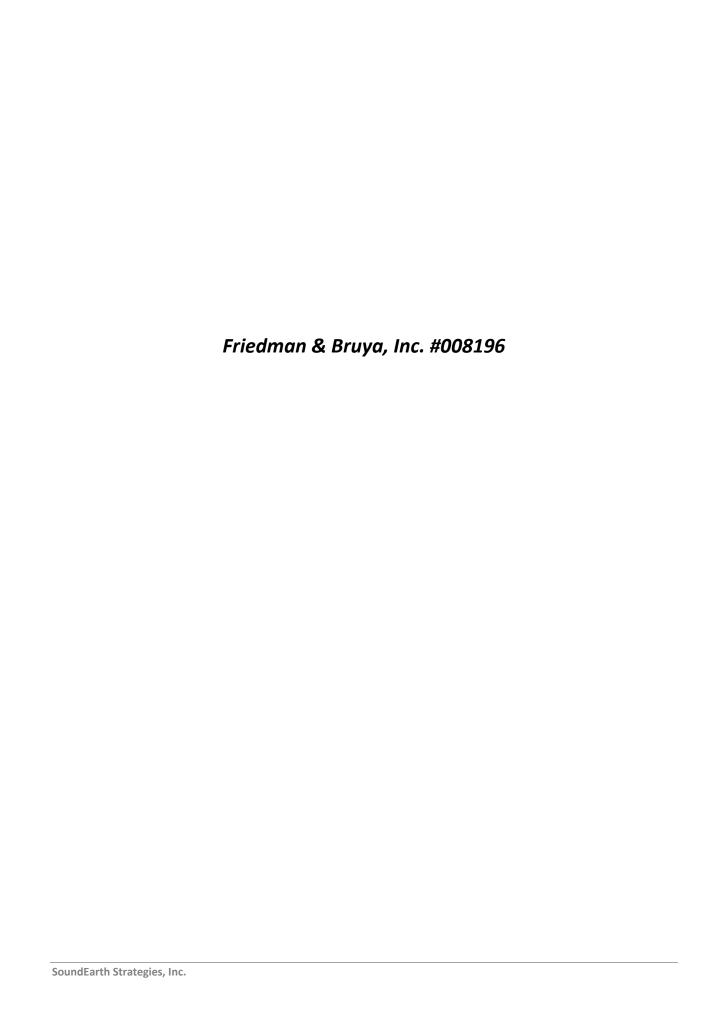
# GROUNDWATER PURGE AND SAMPLE FORM LOW FLOW PUMP - Continued General Info

Client:	NCPE	- Eigld/Samp		0592 D. Mariel			NA 15	\ <u>(</u>
Site Name/#.	COLIVAN	- rieid/sampi				Well ID Numb	er: MW	16
Sample Date:	5/17/11	Sample Time:		ell construction and pu Field Duplicate Sam			impling Ended:	1344
			Samp	oling (Continued fro	m Page 1)			
Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH <sup>1</sup> ± 0.1	Specific Conductivity <sup>1</sup>	Turbidity¹ (NTU) If ≥10, ±10%	Dissolved Oxygen¹ (mg/L)  If ≥1.00, ± 10%	Temperature	ORP
1358	6.97	0.15	\	5.8526	if <10, stabilized	if≤1.00,±0.2 G,38	(°C)	(mV)
1301	6.97	0.15		0.8388	51.8	0.36	15.45	-118
1304	6.98	0.15		0.8443	49.8	6.37	15 99	
1307	6,98	0.15		0,8408	47.9	6.36	15.70	-116
1,70				0701-3	100.9	0.96	19.10	-116
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	1							
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						1		
							<del>\</del>	
Additional Samplin	g Comments:	æ^						
50		/:						
At minimum, pH, spec	cific conductivity, and diss	solved oxygen and/or	turbidity must stab	ilize within the limits (Indi	cated in italics) for thre	e successive readings pric	or to sampling.	

	1 10			Gene	ral Info					
Client:				Project #:	0592					
Site Name/#:	_Coltax		Field/Samplin	g Personnel:	D. Mun	dil		Well ID N	umber: <u>(</u>	MINIOR
				Well	Details					(000)
Total Depth (	(TD) Depth to	Water (DTW)	Water Column	(WC)			g Diamete			Continue
i i i i i i i i i i i i i i i i i i i		=TD-DTW		Volume Conversion 0.75" 1" 2"					Casing Volume =WCx vc	
Fee	et BTOC 6972	Feet BTOC	9_58 Fe				0.17	0.65	1.44	,63
reened Interva	1: <u>4.5</u> t	16.5	eet bgs	Screen S	ubmerged?	NO =	> Place to	bing intake 2 to	3 feet holow don	*h *=
						□ YES ==	⇒Place tu	ibing intake at a	pproximate cente	r of screen
mp Method: 15	☑ Peristaltic □ Oth	or:	O //D. //		oment					
	ument: 🖾 WL Mete	601000	Owner/ID#:  □ Interface □	Krause.	Wat	er Quality M	eter Bran	d/Model: H	molabitonis	Owner/ID#: K
——————————————————————————————————————			- miteriate Li	Otner:		Owne	r/ID#:	252		
nth of Tuhing I	ntake: ~\O Fee	at BTOC			pling					5
Att of Tabilig II	Titake. (O ree	T	Time Start	Purge: -	1036					
	Water Level	Purge Rate			ecific	Turbidity	D	issolved Oxygen <sup>1</sup>		T
Time	(feet)	(L/min)	pH <sup>1</sup>		uctivity <sup>1</sup>	(NTU) If ≥10, ±10%		(mg/L)	Alexandria de la companya della companya della companya de la companya della comp	
min intervals)	drawdown <0.33 feet	0.1-0.5	± 0.1	±	3%	if <10, stabili		if ≥1.00, ± 10% if ≤1.00, ± 0.2	Temperature (ºC)	ORP
044	6173	0.1		0.99		5810		0.50	14.03	(mV)
467	6,90	0.1	-	6,97	118	43.3		1. 95	12.95	-31
50	6.97	0.1		6.96	60	1386		,00	13.12	-35
503	6,93	0.1	9	0.96		96.7		184	13.68	-40
506	6,9,3	0.1	+	0.9		95.0		3,69	12.16	-42
	•			Minanum # c	of Readings	9113		2,60	19,35	-45
57	6.92	0.1		6.95		18-8		3.55	12.50	-48
05	6.90	0.15		0.95		51.3		150	12.63	-51
08	6.93	0.15		6,94	13	14.3		5,45	12.41	-57
11	6,92	0.15		0.93		3.4	0	145	10,42	- 59
14	6110	OID	to an attribution of the same of the same of	0.93	71	13.6	6	143	19.69	- 57
				The part of the same of the part of the same of the part of the same of the part of the pa	Marine Marine Marine Marine Street	The Street of Street or St	4			
ple Date: 5	117/11	Sample Tim	e: 1115	Field	Dunlins C					The particular contract contra
pling Commen	its: Down-well pres		C = 6,9443		D0 = 0	ample Time:		T	me Sampling End	ed: 1135
ftl.	measure a	/quava a	2 0 be	7,24		10	mylL	cup =	113 °C OF	P=-63,
				Analyt	ical					
Sample Number/ID Contain		Contain		Preservative			15	T	Analysis Request	
205- DIL	MATERIAL CONTRACTOR OF THE PARTY OF THE PART	1 x 502 m) ( Coly		allege polytering and a second	(No)	0.45	0.10	Fald me	Analysis Requ	est
		THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	Ç <b>€</b>	HUI	(No)	0.45	0.10	MNA	1304154 (31)	The state of the s
		PROPERTY OF PERSONS ASSESSED FOR PERSONS ASSESSED.	200	HOSCY	(No)	0.45	0.10	VA /I	Transmitter the contract of th	
Name of Particular Designation of Consequences of			3/2		No	0.45	0.10	N 4	the second secon	and in second supplier to the
1/ / Dec(s)/1		1912	Zn Ac		No 0.45 0		N U		and the state of the state of the state of	
				Diama 141	No.	0.45	0.10			
n? ⊠NO □	YES Odor?	NO □ YES ==	> Describe:	Purge W	ater					
		a land	allons	Disposal	Mathad: F	* D*****	Color (de:	scribe): (lec	s, sine Milia	level gunt?
				170300 1000		V Drummed	⊔ Rem	ediation System	Other:	
Security Device	es in good condition	i.e.: Monument P	olts Seals Lean I	Well Cond		<i>a</i>	to the same of the	page -		
			Describe:	LUCKJ?	☐ YES	ØN0 =	⇒ Describ	e: Cy be	it incommable	muschie
	t?	TO LIVES								
r in Monument				-	Ε.Δ.					
r in Monument ional Well Cond	t?  dition Comments or  fic conductivity, and disso	Explanation of an	Access Issues:		M					

# APPENDIX C LABORATORY ANALYTICAL REPORTS





#### **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

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

# ENVIRONMENTAL CHEMISTS

# **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.

<u>Laboratory ID</u>	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.

#### **ENVIRONMENTAL CHEMISTS**

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	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	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	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.

#### **ENVIRONMENTAL CHEMISTS**

# **Data Qualifiers & Definitions**

- $\boldsymbol{a}$  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.
- $\mbox{d} v$  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.

	.,			•							<u> </u>						•
			. ,					<u> </u>			ANA	LYSES	SRE	QUES	TED		
Sample ID	Sample Location	Sample Depth	Lab	Date Sampled	Tim c Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Mctals	NUMBER - HELD			Notes -CC 8/20/10 ML
SP18-4-5	5718	4-5	AG	8/6/K	1946	50,1	7							×		H	
5918-6-7		6-7	PG-	1	1259												
SP18-9-10		9-10	36		1305									X			
5618-10-13	<b>V</b>	12-13	AG		1315											. ,	
SP19-3-4	5919	3-4	05/16		1390									X			
SP17-5-6		5-6	06G		1305												·
5019-7-8		7-8	07/		1335									X			
N-01-P192		10-11.	08AC	- 1	1343	$\sqrt{}$	V									*	j
	·	٠.															_

Friedman & Bruya, Inc. 3012 16th Avenue West

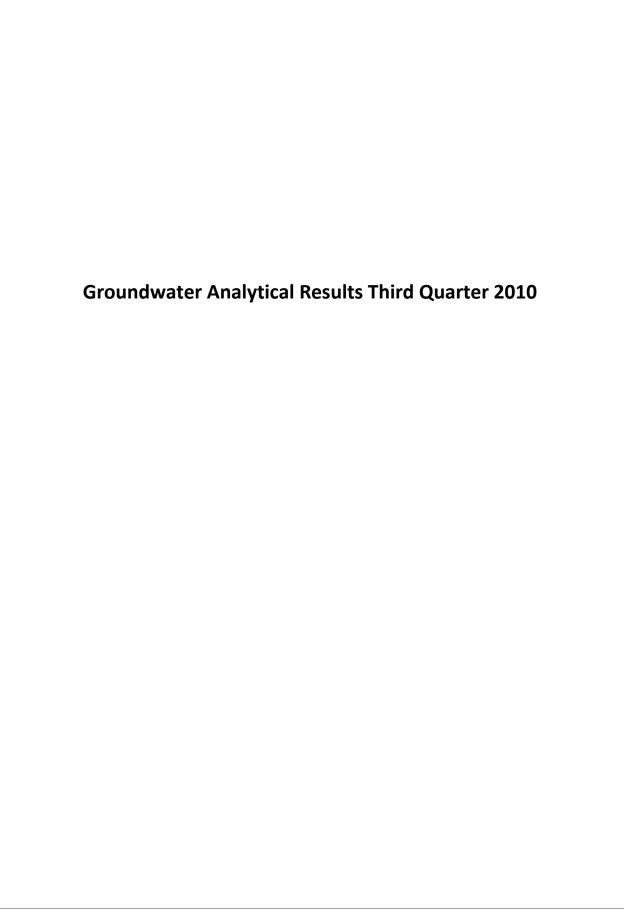
Seattle, WA 98119-Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mendel	SES	18/10	1235
Received by:	than Phan	FEBT	8/18/10	1/
Relinquished by:				
Received by:		. •		

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 2°C





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 #: 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** 

**Client Identification Sampling Date** 

10-A014976 MW02-20100818 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

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

Friedman & Bruya, Inc.

Project Name:

AmTest ID: 10-A014977

AMTEST Identification Number Client Identification

Sampling Date

10-A014977 MW12-20100818 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** 

Client Identification Sampling Date 10-A014978 MW13-20100818 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

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

Friedman & Bruya, Inc. Project Name:

AmTest ID: 10-A014979

**AMTEST Identification Number** 

Client Identification Sampling Date 10-A014979 MW25-20100818 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

Client Identification Sampling Date 10-A014980 MW26-20100818 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

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

Project Name: AmTest ID: 10-A014981

**AMTEST Identification Number** 

**Client Identification** Sampling Date

10-A014981 CMW05-20100818 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

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



Professional Analytical Services

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

#### **DUPLICATES**

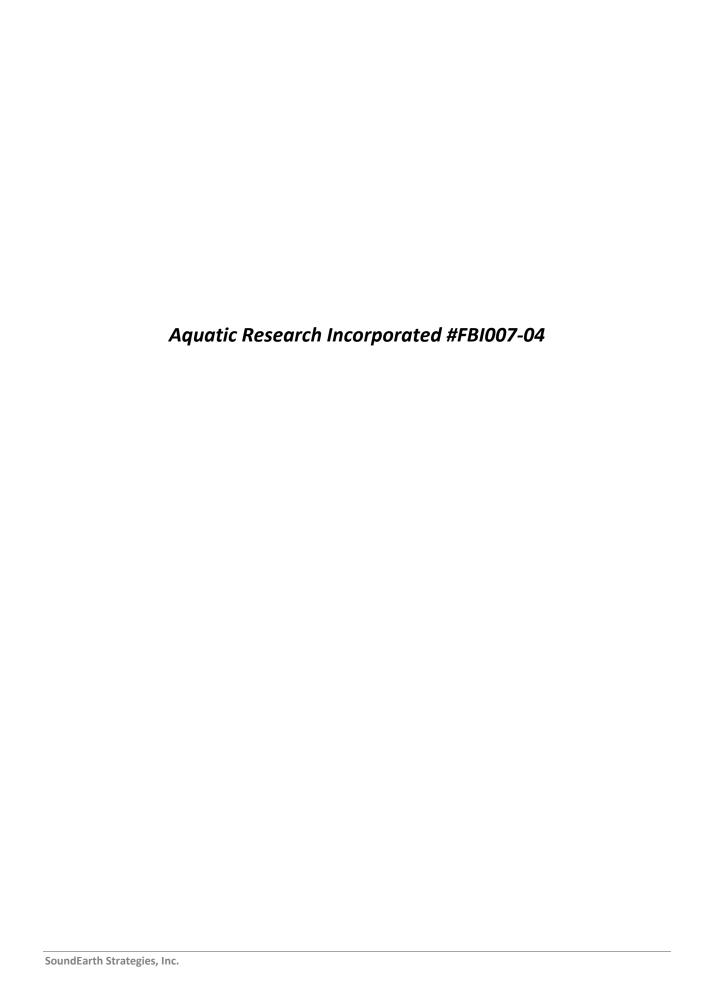
SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
10-A014979	Iron	mg/l	1.17	1.10	6.2
10-A014979	Ferrous Iron	mg/l	0.13	0.13	0.00
10-A014979	Manganese	mg/l	8.00	7.88	1.5

# 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	





#### LABORATORY & CONSULTING SERVICES

 $3927~\mathrm{AURORA}$  AVENUE NORTH, SEATTLE, WA 98103

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

CASE FILE NUMBER: FBI007-04 REPORT DATE: 09/07/10

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

PAGE 1

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER

SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 008234

#### CASE NARRATIVE

DATE SAMPLED:

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**

	ALKALINITY	SULFATE	SULFIDE	TOTAL-P	TKN
SAMPLE ID	(mgCaCO3/l)	(mg/L)	(mg/L)	(mg/L)	(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

	TDS	NITRATE	NITRITE	COD	BOD5
SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(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		



#### LABORATORY & CONSULTING SERVICES

 $3927~\mathrm{AURORA}$  AVENUE NORTH, SEATTLE, WA 98103

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

CASE FILE NUMBER: FBI007-04 PAGE 2

**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

ALKALINITY	SULFATE	SULFIDE	TOTAL-P	TKN
(mgCaCO3/l)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
08/30/10	08/25/10	08/25/10	08/27/10	08/27/10
1.00	1.00	0.05	0.002	0.200
BATCH	CWW05-20100818	CWW05-20100818	CWW05-20100818	CWW05-20100818
77.6	22.4	< 0.05	1.55	0.280
76.0	22.8	< 0.05	1.54	0.282
2.12%	1.51%	NC	0.31%	0.65%
	CWW05-20100818		CWW05-20100818	CWW05-20100818
	22.4		1.55	0.280
	32.7		1.60	2.27
	10.0		0.050	2.00
NA	102.20%	NA	104.80%	99.54%
98.1	10.2		0.089	5.43
100	10.0		0.090	5.79
98.10%	101.94%	NA	98.63%	93.84%
NA	<1.00	< 0.05	< 0.002	< 0.200
	(mgCaCO3/l) SM18 2320B 08/30/10 1.00  BATCH 77.6 76.0 2.12%  NA  98.1 100 98.10%	(mgCaCO3/l) (mg/L)  SM18 2320B 08/30/10 1.00  SM184500SO4E 08/25/10 1.00  BATCH 77.6 22.4 76.0 22.8 2.12%  CWW05-20100818 22.4 32.7 10.0 NA 102.20%  98.1 100 98.10% 101.94%	(mgCaCO3/l)         (mg/L)         (mg/L)           SM18 2320B         SM184500SO4E         EPA 376.1           08/30/10         08/25/10         08/25/10           1.00         1.00         0.05    BATCH  CWW05-20100818  CWW05-20100818  22.4  32.7  10.0  NA  102.20%  NA  P8.1  100  10.0  98.10%  101.94%  NA	(mgCaCO3/l)         (mg/L)         (mg/L)         (mg/L)           SM18 2320B         SM184500SO4E         EPA 376.1         EPA 365.1           08/30/10         08/25/10         08/25/10         08/27/10           1.00         1.00         0.05         0.002    BATCH  CWW05-20100818  CWW05-20100818  CWW05-20100818  A color of the

RPD = RELATIVE PERCENT DIFFERENCE.

NA = NOT APPLICABLE OR NOT AVAILABLE. NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.

INC = 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.



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

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER

SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 008234

#### QA/QC DATA

QC PARAMETER	TDS	NITRATE	NITRITE	COD	BOD5
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(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					
		Г			
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

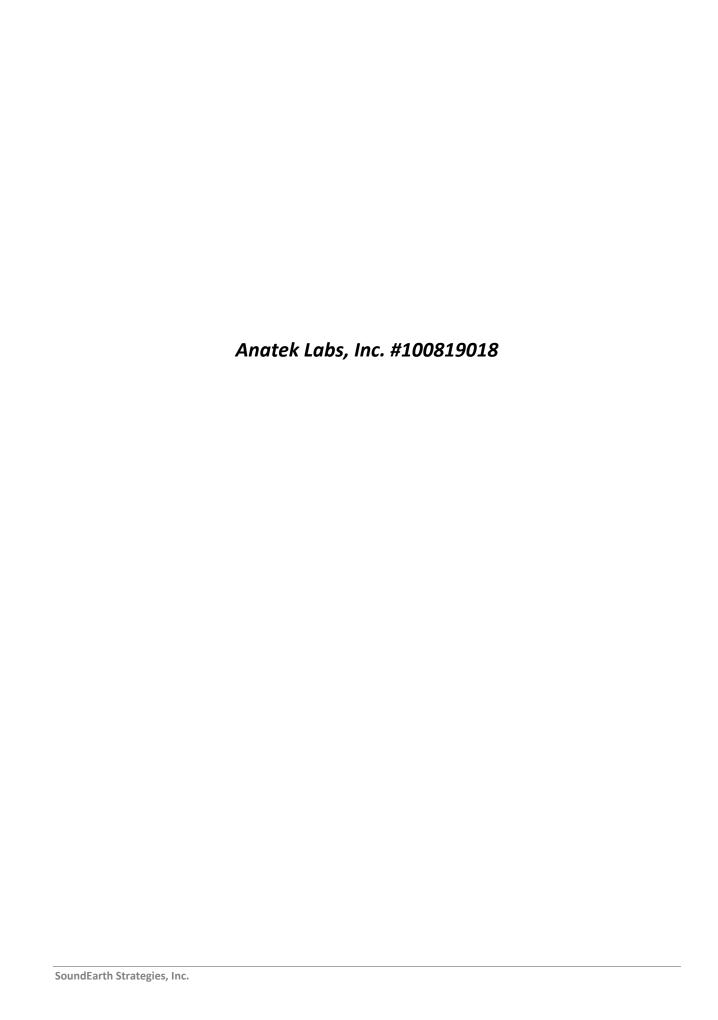
RPD = RELATIVE PERCENT DIFFERENCE

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



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

Batch #:

100819018

**Project Name:** 

0592-001 / COLFAX

Attn:

SEATTLE, WA 98102 R BIXBY / C CACEK

# **Analytical Results Report**

Sample Number

100819018-001 MW12-20100818 Sampling Date

8/18/2010 2:08 PM

**Date/Time Received** 

**Extraction Date** 

1:53 PM 8/19/2010

Client Sample ID Matrix

Comments

Water

Sampling Time

Sample Location

Method Qualifier

Fecal Coliform

Parameter

Result <2

Units MPN/100mL

8/20/2010

PQL

2

KEA SM9221E

Sample Number Client Sample ID

100819018-002 MW21-20100818 Sampling Date Sampling Time 8/18/2010 2:40 PM

**Date/Time Received** 

8/19/2010 1:53 PM

Matrix

Water

Sample Location

Analysis Date Analyst

**Extraction Date** 

Comments

**Parameter** Fecal Coliform Result Units <2 MPN/100mL

PQL 2

Analysis Date Analyst 8/20/2010

Method **KEA** SM9221E Qualifier

Sample Number Client Sample ID 100819018-003 MW25-20100818 **Sampling Date Sampling Time**  8/18/2010 3:23 PM

Date/Time Received

8/19/2010

Matrix

Water

Sample Location

**Extraction Date** 

Comments

**Parameter** Fecal Coliform Result <2

Units MPN/100mL PQL Analysis Date Analyst 2

8/20/2010 KEA

Method SM9221E Qualifier

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

Friday, August 20, 2010 Page 1 of 3

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

100819018-004 MW02-20100818 Sampling Date Sampling Time 8/18/2010

**Date/Time Received** 

8/19/2010 1:53 PM

Client Sample ID Matrix

Water

Sample Location

3:50 PM

**Extraction Date** 

Comments

Parameter Fecal Coliform Result <2

Result

<2

Units MPN/100mL PQL Analysis Date Analyst 2 8/20/2010

KEA

Method Qualifier SM9221E

Sample Number Client Sample ID

100819018-005 MW09-20100818 Sampling Date **Sampling Time** 

8/18/2010 4:35 PM

**Date/Time Received** 

8/19/2010 1:53 PM

**Extraction Date** 

Matrix

Water

Sample Location

Comments

Parameter Fecal Coliform

Units MPN/100mL PQL 2 8/20/2010

Analysis Date Analyst **KEA** 

Method

SM9221E

Qualifier

Sample Number Client Sample ID

100819018-006

Sampling Date Sampling Time 8/18/2010 5:22 PM

Date/Time Received

8/19/2010

Matrix

MW05-20100818 Water

Sample Location

**Extraction Date** 

Comments

**Parameter** Fecal Coliform

Result Units <2 MPN/100mL

PQL Analysis Date Analyst 2 8/20/2010

Method SM9221E

Qualifier

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

Fridav. August 20. 2010

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

**Project Name:** 

0592-001 / COLFAX

Attn:

SEATTLE, WA 98102 R BIXBY / C CACEK

# **Analytical Results Report**

Sample Number

100819018-007

Water

Sampling Date

8/18/2010

**Date/Time Received** 

8/19/2010

Client Sample ID Matrix

Fecal Coliform

MW13-20100818

Sampling Time Sample Location 5:37 PM

**Extraction Date** 

Comments

**Parameter** Result

Units MPN/100mL

<2

<2

Kathleen a. Sattle

Analysis Date Analyst PQL 2 8/20/2010

Method SM9221E Qualifier

Sample Number

100819018-008

Sampling Date

8/18/2010 6:45 PM

2

Date/Time Received

8/19/2010 1:53 PM

Client Sample ID Matrix

Parameter

Fecal Coliform

MW08-20100818 Water

Sampling Time Sample Location

**Extraction Date** 

KEA

**KEA** 

Comments

Result

Units

MPN/100mL

**PQL** Analysis Date Analyst 8/20/2010

Method SM9221E

Qualifier

Authorized Signature

MCL

EPA's Maximum Contaminant Level

ND

Not Detected

POL

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

Fridav. August 20. 2010

Page 3 of 3

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### Login Report

Customer Name: SOUND ENVIRONMENTAL STRATEGIES

Order ID:

100819018

2811 FAIRVIEW AVE E STE 2000

Order Date:

8/19/2010

SEATTLE

WA

98102

Contact Name: R BIXBY / C CACEK

Project Name: 0592-001 / COLFAX

Comment:

Sample #:

100819018-001

Customer Sample #:

Water

MW12-20100818

8/18/2010

Recv'd: Quantity:

**V** 

Collector: DM

**Date Collected:** 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:

Matrix:

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 #:

Customer Sample #:

MW25-20100818

100819018-003

DM

8/18/2010

Recv'd:

**V** 

Collector: Matrix:

Water

Date Collected: **Date Received:** 

8/19/2010 1:53:00 P

Quantity: Comment:

Test

Method

**Due Date** 

Priority

**BACT - FECAL COLIFORMS** 

SM9221E

8/19/2010

Normal (6-10 Days)

Customer Name: SOUND ENVIRONMENTAL STRATEGIES

Order ID:

100819018

2811 FAIRVIEW AVE E STE 2000

Order Date:

8/19/2010

SEATTLE

WA 98102

Contact Name: R BIXBY / C CACEK

Project Name: 0592-001 / COLFAX

Comment:

Sample #:

100819018-004

Customer Sample #:

MW02-20100818

Recv'd:

~ 1

Collector: DM

**Date Collected:** 

8/18/2010

Quantity:

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:

DM

8/18/2010

Quantity:

**~** 

Collector: Matrix:

Water

**Date Collected: 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 #:

Water

MW13-20100818

Recv'd:

~

1

**BACT - FECAL COLIFORMS** 

Collector: DM

Matrix:

8/18/2010

Quantity: Comment:

**Date Collected: Date Received:** 

8/19/2010 1:53:00 P

Test

Method SM9221E

**Due Date** 8/19/2010 **Priority** Normal (6-10 Days) Customer Name: SOUND ENVIRONMENTAL STRATEGIES

Order ID:

100819018

2811 FAIRVIEW AVE E STE 2000

WA

98102

8/19/2010

Contact Name: R BIXBY / C CACEK

SEATTLE

Project Name: 0592-001 / COLFAX

Order Date:

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 8/19/2010

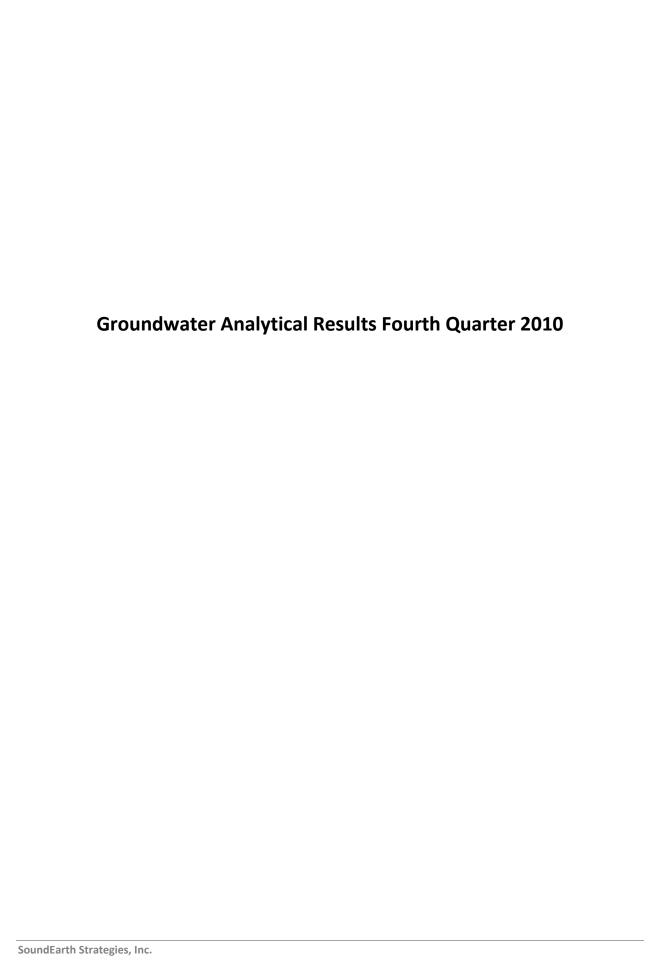
											J. OAII	0	1101201	Uist	ILC AD	0/13/2010
***	RR.	viu.	Cade		SAMPLE	RS (siana)	turel	1	6/1	/	)592-0	001/	COLF	AX		
Send Report 7  Company 5  Address 36	und Envis	EUNEUP	Stra	Jeggs		79-001		olla	X	Pt				charg		rized by:
City, State, ZI	p Seat	the WA	. 98	103	REMAR!	KS				GEM 1			if Disp □ Retu	005C 8	LE DISP iter 30 d imples with instr	lays
	г		,	-		1 -				ANA	LYSE	SREC	QUES	TED	* .	
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	SVOC's by 8270	RCRA-8 Metals	Fecal Coliforn		1	Votes
MM13-30100818	MUID	13.		2/18/10	1408	H30	1						X	•	1 *	
BISCOICE-IEWM		13			1440	1.1.							X			
4M32-90,00018	MW95	111			1593	- E							X			
8180010G-60M1	COMM	131	. Di		1550				÷				X			
1mod-90100818	MWO9	13			1635						13		X			
m02-00100818	MW05	13	1. 1	_	1792								X		_	
M13-30100818	MW13	13	_*1)		1737							*	X		7/	1
IMDR-BOIDCEIR	MWOS	11 .	1	₩ .	1845	4	·V						X		#	ubero
	La Tampa						ė		4.1						1	0.10
		5.0		Tip.	- 01										Cor	
ą ·				Trans.				- 1							2	4.
**				-	it is				-		*.					
4					•	- 4										
Friedman & Bri 3012 16th Aver Seattle, WA 981	we West	Relinquishe	d by	NATURE List		PR David KSC	11			S	COM ES nute	PANY		8/	18/10 19/10	1353
Ph. (206) 285-8	282	Relinquishe	d By: .			I					÷					

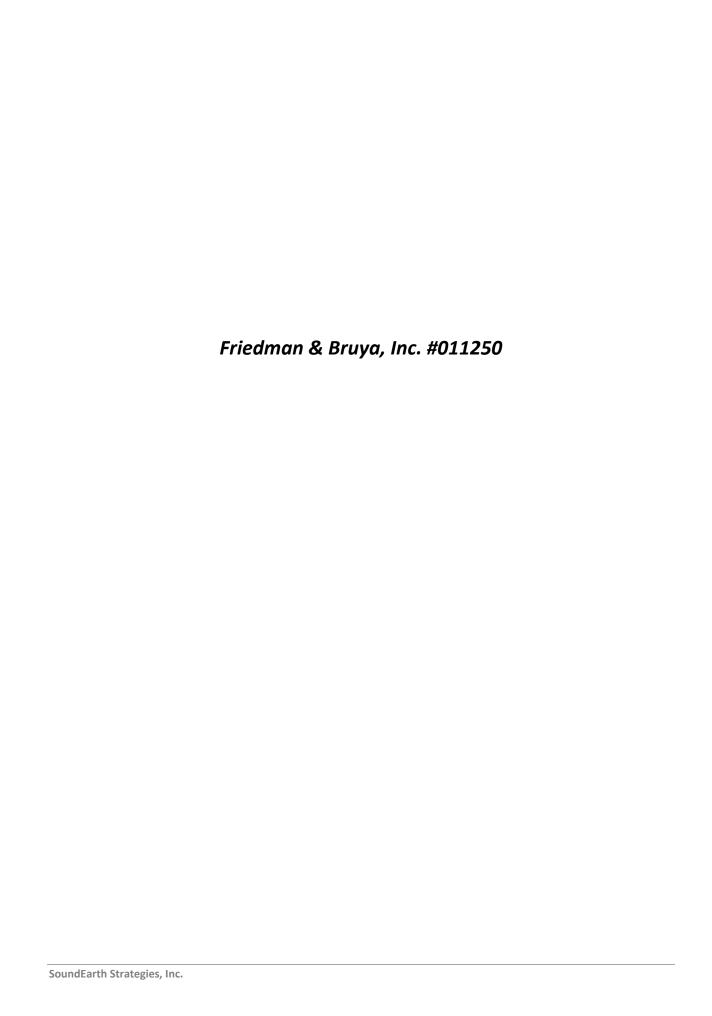
FORMS\COC\SESGEMSR1.DOC (Revision 1)

Received by:

Fax (206) 283-5044

Samples received at 2.4 °C





#### **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

#### **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.

T 1 . TTS	
<u>Laboratory ID</u>	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
	MAIN OF MURULEU

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.

0	11	2	5	0	•

Send Report To Chuck Cacek
Company Sound Earth Strateges
Address 2011 Familio Ave E Suite 2000
City, State, ZIP Seath, WA 98 102
Phone # 206 - 306 - 1907

SA	MPLE CHAIN OF CUSTODY	ME 11-19	-10 V5/BO5/ AIG
·	SAMPLERS (signature)		Page # of TURNAROUND TIME
	PROJECT NAME/NO. NCPC / 0592 - 001	PO#	Zi-Standard (2 Weeks) ☐ RUSH
103	REMARKS Without Affermation = Sulfate Subject, Methods, total Kyden Nd, Philosphotons. Nitrates, Nitrites	GEMS Y / N	SAMPLE DISPOSAL  Lispose after 30 days Return samples Will call with instructions

	ļ <u>.</u>		4									ANA	LYSE	SREC	ANALYSES REQUESTED						
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Ma	trix	# of jars	NWTPH.Dx	NWTPH-Gx	BTEX by 8021B	Total Lead VOG's by 8260.	Distinct Lad SVOC's by 8270	Netwell Attenuels HORA & Metals			Notes				
Amode - acionie	MW 20	19	01	11/16/10	1234	614	0	1	X				i	,							
2111010E-PIWM	PIWM	16	02 A	\ \	1945	1		5	×	×	X										
Mm31-90101116	MW31	10	03 A.		1318			5	×	×	X										
9111010E - FIWM	TIWM	15	04A=		1338		(h)	) 5(3)	X	X	X										
WM 30 - 50101116	MW30	10.5	05A	5	1418			5	X	X	X										
MM18-90101116	MWIS	1 1	1000 1	4 1	1493	1		5	×	X	X										
MW16 210116	MW16	15	A-E OTE		1590	*	\	5	X	X	X			:							
Mmcd-20101116	POWM	li.5	08		1596	1		í	X												
PHOPE-OFMW	MWIC	11.5	09		16,30			l	X												
SINOIDE-EEWM	MW39	$\epsilon_{\rm i}$	A-E	$\vee$	1634			5	X	$\times$	X										
TINDIOC-PEWN	MWBCI	13	11 <sub>AE</sub>	11/17/10	1004			5	X	X	X					i					
	MW13	12.5	(2. A.J	1	1005			10	X	X	X			X							
TIHOUG - STWM	MWIS	13	13 A.E	1	1019	\		5	×	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	565	11/19/10	G830
Received by: M luplan	Nhan Phan	FEBI	11/19/10	0852
Relinquished by:				
Received by:		Samples re	ceived at <u>-२</u>	°C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

0	II	250	

SAMPLE CHAIN OF CUSTODY ME 11-19-10 SAMPLERS (signature) TURNAROUND TIME PROJECT NAME/NO. PO# X Standard (2 Weeks) D RUSH\_ NCPC/0593-001 Rush charges authorized by: REMARKS SAMPLE DISPOSAL Notrail Attenuation - Sulfate, Sulfist, Methan, Total Kich. ND, Thosphurus, Nitrates, Nitrites ZDispose after 30 days

GEMS Y/N

☐ Return samples

☐ Will call with instructions

Send Report To_Chick Acek
Company SoundEarth Strategirs
Address 2811 Fairview Auge E Shite 2000
City, State, ZIP South WA 98102
Phone # 206-306-1900 Fax # 206-306-1907

				,			T	T	<del></del>		ANA	LYSE	SREC	QUES	TED	
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead	Sissolved Led	Nedwal Attentional			Notes
FILLOICK-PPWM	MW79	19.5	14 A-E	11/17/10	1130	H20	5	X	X	X						
F11/006-86WM	WM38	14	A.E	١.	1236	ì	5	X	X	X						
F1110106-11WM	MW().	11.5	10 E		1239		5	X	X	X						
4M96-90101117	WM 36	13	工和		1338	1	10	$\times$	$\times$	文			X			
LINOIR-EIMM	WMID	11.5	18 A.E		1350		5						X			
FILDICE-FEWIM	MW27	13	A.G	-	1545		7	X	X	X	X	X				
MW25-20101177	MW25	11.5	A.E		1548	1	5					• • •	X			
4 11 pick-com	MMDS	12	21 E		1729		5		1				X	ŀ		
CMW05-201117	CMW05	11,5	27 A.E	V	1738		5	l					X		<del></del>	
MMO3-5011118	MWO3	13.5	AE	11/18/10	0945	}	5				·		X			
8111010G-1 COUM	MWOI		24	i	0954			X					-			
4W07-20118	TOWM	15	25 A-E	$\downarrow$	1057	<b>V</b>	5	-					$\times$			

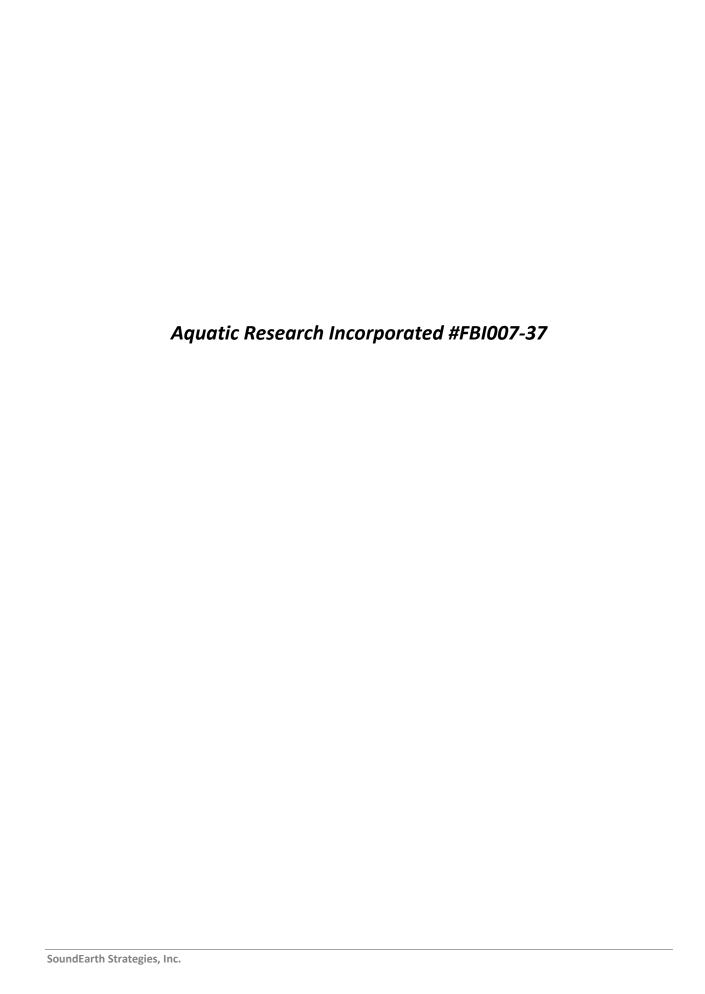
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

CICNIAMIIDE		***************************************		
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Sowid Mendel	SES	W1910	U850
Received by: May aw	Whan Phan	FEBT	11/19/10	085€
Relinquished by:			1947	· · · · · · · · · · · · · · · · · · ·
Received by:		Samples receiv	red at 2	°C

FORMS\COC\SESGEMSR1.DOC (Revision 1)





#### 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

	NITRATE	NITRITE	SULFATE	SULFIDE	TOTAL-P	TKN
SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(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



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

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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	NITRITE	SULFATE	SULFIDE	TOTAL-P	TKN
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(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%
<b>QC СНЕСК</b>						
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.

INFO — ARLA LIVE FARLES). DIFFERENCE.

NA = NOT APPLICABLE OR NOT AVAILABLE.

NA = 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





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 16<sup>th</sup> Ave W. Seattle, WA 98119

RE: 011250

Fremont Project No: CHM101122-1

December 2<sup>nd</sup>, 2010

#### Michael:

Enclosed are the analytical results for the *011250* water samples submitted to Fremont Analytical on November 22<sup>nd</sup>, 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!

6Pm

Sincerely,

Michael Dee

Sr. Chemist / Principal

mikedee@fremontanalytical.com



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

<sup>&</sup>quot;nd" Indicates not detected at listed reporting limits

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

Spike Concentration = 100 PPMV

<sup>&</sup>quot;int" Indicates that interference prevents determination

<sup>\*</sup> Instrument Detection Limit

<sup>&</sup>quot;J" Indicates estimated value

<sup>&</sup>quot;MRL" Indicates Method Reporting Limit

<sup>&</sup>quot;LCS" Indicates Laboratory Control Sample "RPD" Indicates Relative Percent Difference



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

				Duplicate	
RSK-175 (mg/L)	MRL	MW25-20101117	MW02-20101117	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%

<sup>&</sup>quot;nd" Indicates not detected at listed reporting limits

Acceptable RPD is determined to be less than 30% Acceptable Recovery Limits:

LCS, LCSD = 80% to 120% Spike Concentration = 100 PPMV

<sup>&</sup>quot;int" Indicates that interference prevents determination

<sup>\*</sup> Instrument Detection Limit

<sup>&</sup>quot;J" Indicates estimated value

<sup>&</sup>quot;MRL" Indicates Method Reporting Limit

<sup>&</sup>quot;LCS" Indicates Laboratory Control Sample "RPD" Indicates Relative Percent Difference



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

<sup>&</sup>quot;nd" Indicates not detected at listed reporting limits

Acceptable RPD is determined to be less than 30% Acceptable Recovery Limits:

LCS, LCSD = 80% to 120% Spike Concentration = 100 PPMV

<sup>&</sup>quot;int" Indicates that interference prevents determination

<sup>\*</sup> Instrument Detection Limit

<sup>&</sup>quot;J" Indicates estimated value

<sup>&</sup>quot;MRL" Indicates Method Reporting Limit

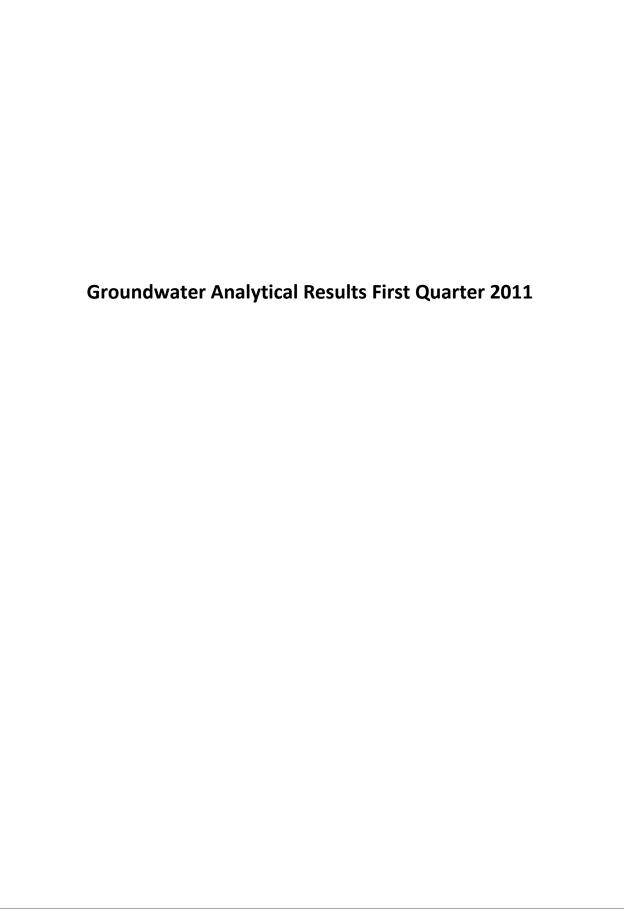
<sup>&</sup>quot;LCS" Indicates Laboratory Control Sample

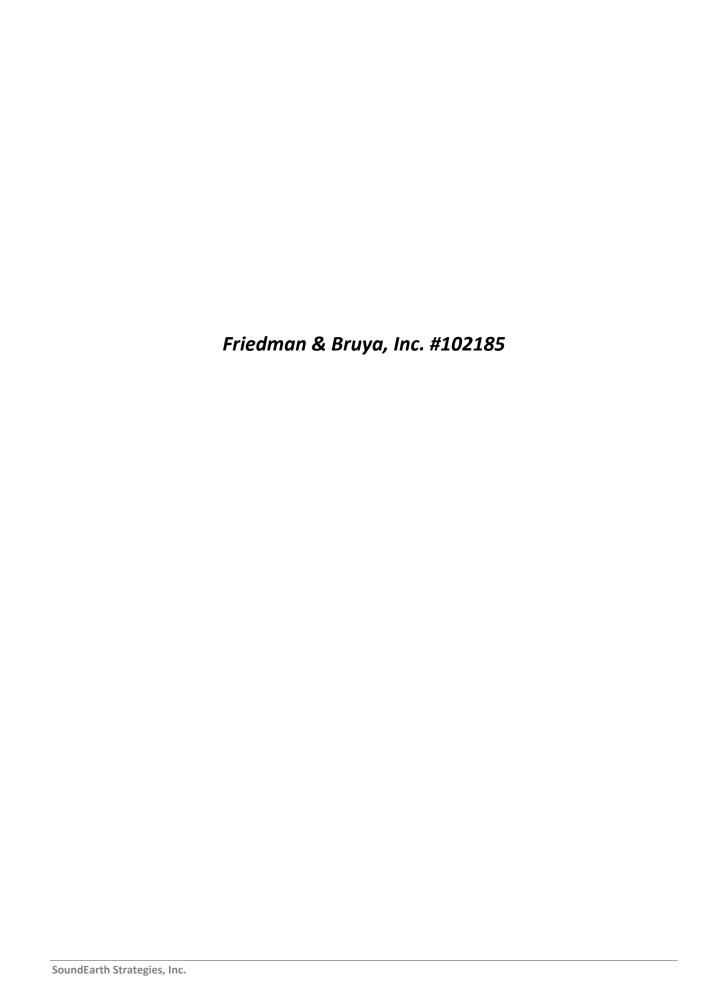
<sup>&</sup>quot;RPD" Indicates Relative Percent Difference

# SUBCONTRACT SAMPLE CHAIN OF CUSTODY

CHMIDIIZZ-I

Send Report <u>To</u>	Michael	Erdahl	ng.	!	SUB	CONTR	RACTE	$\overline{\mathbb{R}}$ t	umm	<del></del>							, \		
Company F		•	<b>₩</b>		PRO	JECT N	AME/	NO.	Mon	<u> </u>			PO #	_	J <b>∠</b> St		NAROUN l (2 Week		
Address 3			THE.	<del></del>		0	11250	ב				A-7	08	-	© RUSH			<del></del>	
City, State, ZIP S	eattle, '	WA 98119		er was	REM	1ARKS	and the second s	. r								SAM	PLE DIS	POSAL	or AMADAMA at an
Phone # (200) 285	د دیده دیده	For#_ (20	06) 283-5 <u>044</u>			merd;	Please a <u>nlæñ</u> :	Emai	il Resu <u>mandt</u>	ults <u>)ruya .</u>	26.71				- □ Re	turn sa	ifter 30 d amples with in a		
	1			т		7		·		ANAI	ZYSE.	REC	រូបខន	TED			]	^	
Sample ID	lab H)	Date Sampled	Time Sampled	Mat	trix	# of jars	Oil and Greaso	Fig.	НДЛ	Nitrate	Suffite	Alkalınity	Dissolved		California de la composição de la compos			Notes	. :
MW13-20101117		11/17/10		l w	<u> </u>	Z				. ]			*				^ ^		
MW26-20101117	ļ <u>.</u>	'	<u> </u>	1									Ì					·	
MW12-20101117						<u> </u>													
MW25-20101117					·											i			
MW07-20101117	<u> </u>																		-
CMW05-20101117		<u> </u>																	
MW03-20101118	<b> </b>	11/14/13	<u> </u>									-							
MW07-2010 1118	<u> </u>	[ [		1															
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Friedman & Bruya, 3012 16th Avenue W		Kelinguished b	SIGNATURE	7	· · · · · · · · · · · · · · · · · · ·	Micha	PI el Erda	RINT 1 ahl	NAME	S		Rrie	CON dman	MPAN & Bro			DATE	TIMI	
Seattle, WA 98119-2	2029	Received by:							<u>a</u>			<del> </del>		W D10	ıya ———	7	refer	1- 00 Pm	<del>ا</del> ا
Ph. (206) 285-8282	-	Relinquished by	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Nin	<u>لم حمک</u>	M	~~ <u></u>		I F.	A.	<del></del>	······································	10	12210	13 4	7
Fax (206) 283-5044	-	Received by:				<del> </del>						<del> </del>		· · · · · · · · · · · · · · · · · · ·	*			ļ	





# 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

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

## 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.

<u>Laboratory ID</u>	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 Client Identification

Sampling Date

11-A002154 MW25-20110215 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	МО	02/17/11
Nitrate	< 0.05	mg/l		0.050	EPA 300.0	МО	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 Client Identification Sampling Date 11-A002155 MW07-20110215 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	МО	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 Client Identification Sampling Date 11-A002156 MW12-20110216 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	МО	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 Client Identification Sampling Date 11-A002157 MW26-20110216 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	МО	02/17/11
Nitrate	< 0.05	mg/l		0.050	EPA 300.0	МО	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



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**

BEATITIO		
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	SUBCONTRACTER A - ket	Page # of' TURNAROUND TIME	
Company Friedman and Bruya, Inc.	PROJECT NAME/NO.	PO#	≅ Standard (2 Weeks) □ RUSH
Address3012 16th Ave W	102185	A-871	Rush charges authorized by:
City, State, ZIP_Seattle, WA 98119	REMARKS		SAMPLE DISPOSAL  Dispose after 30 days
Phone # (206) 285-8282 Fax # (206) 283-5044	Please Email Résults merdahl@friedmanandbruya.com		☐ Return samples ☐ Will call with instructions

						ANALYSES REQUESTED							I			
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	БРН	VPH	Nitrate	Sulfate	Alkalinity	Nitik	Total Fe			Notes
MW25-20110215		2/5/11	1547	41	2				У			×	Х	٧		
MW07-20110215		1	1755		2				×			ע	ע	X		
MW12-20110215		2/10/11	0956		2				×			У	У	×		• .
MW26-2011 0216		· •	1145	1	2				¥			رو	×	メ		
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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:			1	
Relinquished by:				
Received by:	1			

10218	5				SAMPLE	CHAIN O	F CUS	STOD	Y	MÉ	5. 0	2/7	71	11.		40	3
Send Report To	C Ca	ech,	RB	ixby	SAMPL	ERS (signati		2		E,	1		Ī	T	URN	AROUNI	O TIME
Send Report To Company Address	comed Ea	th SI	trof Su	17 200 17 200	PROJE	CT NAME/N	- ,	- CC	1 .		PO	#		□ RUS	H	(2 Weeks	
City, State, ZIP	Seut	ik, W	4.9	18103	REMAI	RKS 16thic For N 6thic For Pate	itales ital Fe	BNito Stepta	ites; nalysis	GI	EMS	Y/N	'	<b>X</b> Disp □ Retu	osę a um sa	PLE DISI fter 30 da mples vith instr	ays '
	<u>*.                                    </u>	T	!	,							ANAI	YSES	REC	QUES	TED		
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	als			2	Notes
MW35-200315	GEWM	9	OIA	19/15/11.	1547	Water	3							X	/	Horr	1 BHz
MWC7-20110315	FOWN.	10	12 AP	9/15/11	1755	Wiche	5							X		HULD	i bottle
3160110G-CIWM!	GIWM	10	63 A T	P8/16/11	0956	Weber	3							X	/	KICKE	16th
DICONOG-DOWN	HM-36	10	ount	9116/11	1145	Water	2							メ	/	HOUS	) lette
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Friedman & Br	ruya, Inc. [		SIC	NATURE		PF	RINTN	AME				COM	PAN	Y		DATE	TIME
<b>3012 16th Aven</b>	iue West	Relinquish	ed by:	/ fran	C	David	Mende	1			•	SE	Ś		5	716/11	1345

FORMS\COC\SESGEMSRIDOO(Revision 1)

Relinquished by:

Received by:

Received by:

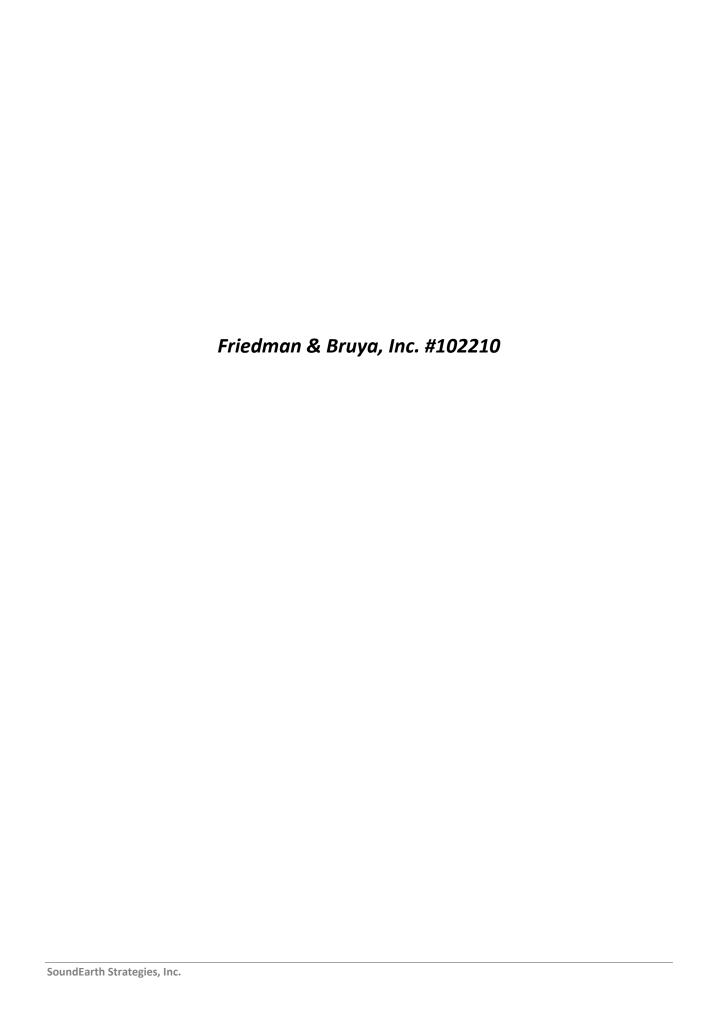
Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

David Mondel

Samples received at WASNOOCNSER JEMSEL LOULLINE



## 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

# FRIEDMAN & BRUYA, INC.

# ENVIRONMENTAL CHEMISTS

#### 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.

<u>Laboratory ID</u>	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

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 Client Identification Sampling Date

11-A002396 MW25-20110215 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

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

AMTEST Identification Number Client Identification Sampling Date 11-A002397 MW07-20110215 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

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

AMTEST Identification Number Client Identification Sampling Date 11-A002398 MW12-20110216 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

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-A0

Client Identification
Sampling Date

11-A002399 MW26-20110216 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

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	82.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number Client Identification Sampling Date 11-A002400 MW13-20110216 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	МО	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	МО	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

ior iniciale by an initial action										
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			

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	32.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number Client Identification Sampling Date 11-A002401 MW02-20110216 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	МО	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

TOT INICIAIS BY EL 71 INICIA	ior iniciale by an it inicialed accord										
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				

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 Client Identification Sampling Date 11-A002402 MW03-20110217 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	МО	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	МО	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

TOT INGUALS BY EL 71 INGU	10 G 20011						
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

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Methane	64.	ug/L		1.3	RSK 175	Sublet	02/28/11

AMTEST Identification Number Client Identification Sampling Date

11-A002404 MW25-20110217 02/17/11, 12:37

# **Conventionals**

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

# **Minerals**

PARAMETER	RESULT	UNITS	TS 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 Suite C Kirkland, WA, 98034 (425) 885-1664 www.amtestlab.com



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**

ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
Total Nitrogen (TKN)	mg/l	< 0.1	0.466	0.500	93.20 %
Nitrate	mg/l	< 0.05	2.55	2.50	102.00 %
Nitrate	mg/l	< 0.05	2.20	2.50	88.00 %
Nitrite	mg/l	< 0.05	2.20	2.50	88.00 %
Nitrite	mg/l	< 0.05	2.20	2.50	88.00 %
Total Phosphorus	mg/l	< 0.005	0.093	0.100	93.00 %
Total Phosphorus	mg/l	0.154	0.260	0.100	106.00 %
Total Phosphorus	mg/l	0.075	0.179	0.100	104.00 %
Total Phosphorus	mg/l	< 0.005	0.103	0.100	103.00 %
Total Phosphorus	mg/l	< 0.005	0.106	0.100	106.00 %
Total Phosphorus	mg/l	1.02	3.56	2.50	101.60 %
Total Phosphorus	mg/l	0.024	0.129	0.100	105.00 %
Total Phosphorus	mg/l	0.008	0.112	0.100	104.00 %
Ferrous Iron	mg/l	0.08	1.09	1.00	101.00 %
	Total Nitrogen (TKN) Nitrate Nitrate Nitrite Nitrite Total Phosphorus	Total Nitrogen (TKN)  Nitrate  Nitrate  Nitrite  Mitrite  Total Phosphorus  mg/l  Total Phosphorus  mg/l  Total Phosphorus  mg/l	Total Nitrogen (TKN)         mg/l         < 0.1	Total Nitrogen (TKN)         mg/l         < 0.1         0.466           Nitrate         mg/l         < 0.05	Total Nitrogen (TKN)         mg/l         < 0.1         0.466         0.500           Nitrate         mg/l         < 0.05

# 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**

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

QC Summary for sample numbers: 11-A002396 to 11-A002404...

PAGE: 3

# **BLANKS** continued....

BLANKS continued		
ANALYTE	UNITS	RESULT
Manganese	mg/l	< 0.0005

# SUBCONTRACT SAMPLE CHAIN OF CUSTODY

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Send Report To 1	Michael	Erdahl		SUB	CONTE	RACT	ER A	mlest							Page #		of	
Company F	ompany Friedman and Bruya, Inc. PROJECT NAME/NO. PO#								∕Standard (2 Weeks) □ RUSH									
Address3	012 16	th Ave W			10	2210	)	•			A - 8	71		Rush	charge	es aut	horized by:	
City, State, ZIP <u>S</u> Phone # <u>(206) 285</u>			06) 283-5044	REM				uil Resu anandb		om				☐ Disp ☐ Ret	pose a urn sa	fter 30 mples		
									ANAI	YSE	REG	UES	TED					<u> </u>
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Fe 24 und Groase	に配置	がお野田	Vitrate	Sulfate	kalinity	2/10/2	N	Methore	Ganse	he	Notes	

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Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Fe 24 Oil and Groase	7341 FC EEEE	いた。お野田	Nitrate	Sulfate	Alkalinity	Maphoris	TKN	Dissolved	140	Sulfide	Notes
MW25-20110215	<u> </u>	2/15/11	1547	Ų	4						¥	X	Х	×	×	×	
MW07-20110215	<u> </u>	1	1755		5					×	1			1		î	
MW12-20110216		2/16/11	0956		5					1				$\Pi$			•
M W26 - 2011 0216		1	1145		5									H	11		
MW13-20110216			1553		7	×	×	×	X			$\Box$		$H^-$	++-	-	
MW02-20110216		J	1739		7	×	×	<i>/</i> -	×					$H^{-}$	++-		
MW03-20110217		2/17/11	05/4		7	<b>&gt;</b>	×	Х	×						††-	-	<u> </u>
CMW05-20110217		1	10 56		7	×	X	×	Х	1	1	<b>*</b>	<b>—</b>	1			
MW2520110217		V	1237		2			/-		X				1	1	Ψ	
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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
	Michael Erdahl	Friedman & Bruya	2/18/11	11:50AM
Received by:  Relinquished by:			/ /	
Received by:				
Industries by:		· · · · · · · · · · · · · · · · · · ·		

102210	SAMPLE CHAIN OF CUSTODY	ME 02/18	8/11 V2/BIW
Send Report To Ecacek, R. Bixby	SAMPLERS (signature)	later	Page # of TURNAROUND TIME
Company Sound Earth Strategies  Address 2011 Fairvaw An E Suit 2000	PROJECT NAME/NO.  NOPC /0570-CUI	PO#	☐ Standard (2 Weeks) ☐ RUSH Rush charges authorized by:
City, State, ZIP ScHe, Wd 98107  Phone # 206.306, 1900 Fax # 206.306, 1907	REMARKS	GEMS Y/N	SAMPLE DISPOSAL  Dispose after 30 days Return samples Will call with instructions

SAMPLERS (signature)	later	Page # of TURNAROUND TIME
PROJECT NAME/NO. NCPC /0570-CV/	PO#	☐ Standard (2 Weeks) ☐ RUSH
REMARKS	GEMS Y/N	SAMPLE DISPOSAL  Dispose after 30 days Return samples Will call with instructions

							ANALYSES REQUESTED										
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Sulfate NWTPH D*	Suffide NWTPH 0*	Total Mangarex BTEX by 8021B	Dissilved Mallune VOC's by 8288	SVOC's by 8870	Pluscharus RCRA & Motals	Alkalinity	Zitzhest Zitzhes	Total Fe+Fe2+	Notes
4100110G-26WM	MWDS	9	01 \$	$\theta V = V \cdot V$	1547	Moter	64	J	X	X	X	X	X	X	,		
210010G-FOWN	MW07	10	OZ A		1755		15	X	X	X	X	X	X	X			
4150113-6110316	SIMM	W	03 A	9/16/11	0956		75	X	X	X	X	X	X	X			
DICONOG~ZEWM	MWDE	16	OY A		1145	-	75	X	X	X	X	X	X	X			Oppor CC
216010G-E1WM	RWI3	10.5	05 6		1553		7	X	X	X	X	X	X	X	X	(X)	2/18/11
SICONOG-GOWN	MUOD	9	06		1739		7	X	X	X	X	X	X	X	X	(X)	ME
MW03-2011097	MWUS	10	67	9/141/1	0914		7	X	X	X	X	X	X	X	X	0	
CMW05-2010317	CMW05	W	08		1056		7	X	X	X	×	×	X	X	X	8	
4) COVOC-26WM	ZGWM	9	09 2		1337		B	X							•	Rus	for Sulfate
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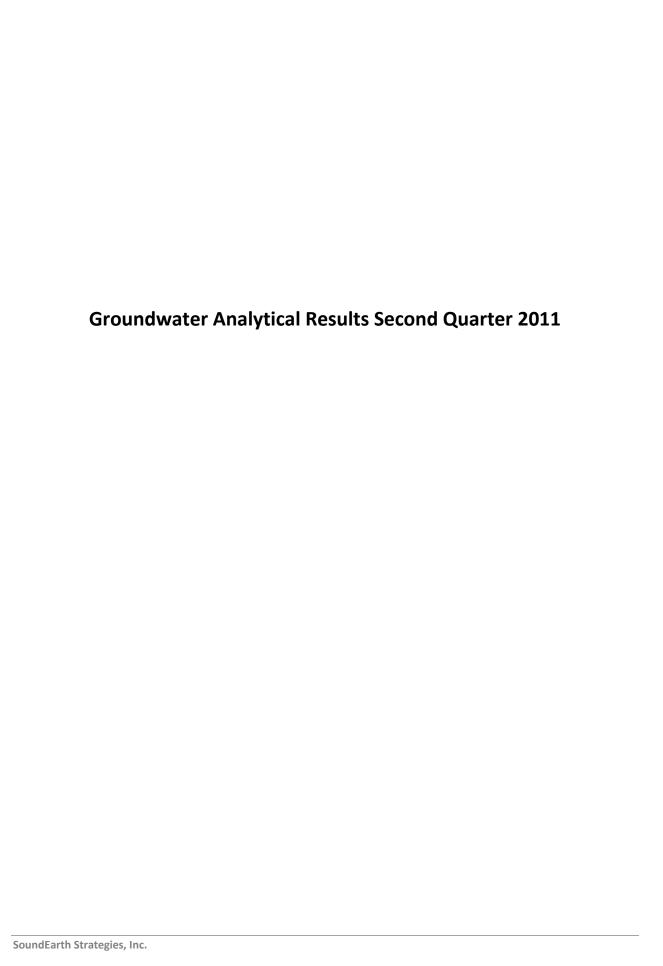
Friedman & Bruya, Inc. 3012 16th Avenue West

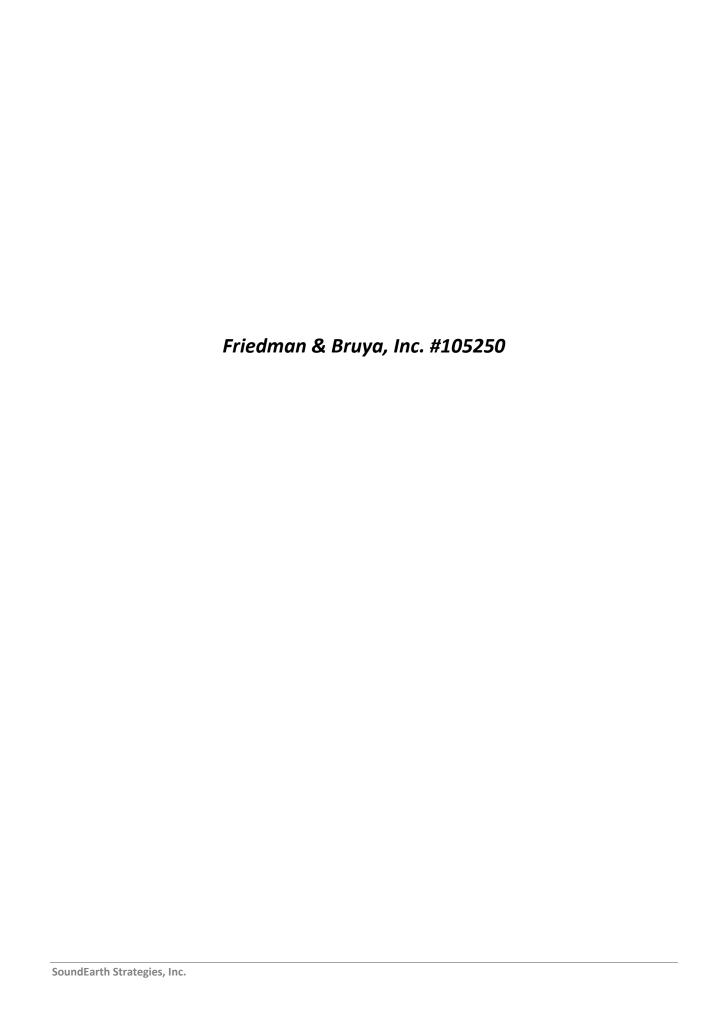
Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mendel	55	E/18/11	(000)
Received by: and and	- Nhan Phan	FEBI	02/18/11	1
Relinquished by:				
Received by:		Samples receive	3 0	





## 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

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

## **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.

<u>Laboratory ID</u>	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

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 Client Identification

Client Identificatio Sampling Date 11-A007261 CMW05-20110517 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

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 Client Identification Sampling Date 11-A007262 MW26-20110517 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

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 Client Identification Sampling Date 11-A007263 MW13-20110518 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

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 Client Identification Sampling Date 11-A007264 MW12-20110518 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

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 Client Identification Sampling Date

11-A007265 MW03-20110518 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

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 Client Identification Sampling Date

11-A007266 MW07-20110518 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

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 Client Identification Sampling Date 11-A007267 MW25-20110519 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

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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 Client Identification Sampling Date

11-A007268 MW02-20110519 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	МО	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	МО	05/19/11
Nitrate	< 0.3	mg/l		0.30	EPA 300.0	МО	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

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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



**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

DLANNO		
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) 2	85-8282 Fax # (206) 283-5044							

SUBCONTRACTER Antest	
PROJECT NAME/NO.	PO#
105250	8-137
REMARKS	

Please Email Results

merdahl@friedmanandbruya.com

Page # \_\_\_\_\_\_ of \_\_\_\_

TURNAROUND TIME

Standard (2 Weeks)

RUSH\_\_\_\_\_\_
Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

-										ANAI	LYSE	SREC	QUES	TED			
	Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	TAY MA	Witch VPH	Nitrate	Sulfate	Alkalinity	Su 14de	TKN	Phosphores	Total Fe and Fe2+	Notes
61	CMW05-20110577 ,		5/17/11	1115	v			X			×	×	×	×	×		
	MW26-20110517		l'i	1310				1			1			1	1		
63	MW13-20110518 .		5/18/11	1030													
64	MW12-20110518			1208													
65	M W03 - 201/0518			1333													
66	MW07-20110518 MW25-20110519		1	1430													
67	MW25-20110519		5/19/11	1020					×	×						×	
68	MW02-20110519		1	1157	4	25-		1	×	×	1	1	1	V	V	×	
-																	
-																	
-	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: Au	Amore Llake	Printest	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

MGR

Sr. Chemist / Principal

Date: 05/26/2011



CLIENT: Friedman & Bruya Work Order Sample Summary

**Project:** 105250 **Lab Order:** 1105100

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



# **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.



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

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



5/24/2011

mg/L

WO#: 1105100

Date Reported: 5/26/2011

Client: Friedman & Bruya Collection Date: 5/17/2011 1:10:00 PM

**Project**: 105250

Methane

Lab ID: 1105100-002 Matrix: Groundwater

0.0440

Client Sample ID: MW26-20110517

Analyses Result RL Qual Units DF Date Analyzed

Dissolved Gases by RSK-175

Analyst: MD

0.00500

Qualifiers: B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



5/24/2011

mg/L

WO#: 1105100

Date Reported: 5/26/2011

Client: Friedman & Bruya Collection Date: 5/18/2011 10:30:00 AM

**Project:** 105250

Methane

Lab ID: 1105100-003 Matrix: Groundwater

0.0305

Client Sample ID: MW13-20110518

Analyses Result RL Qual Units DF Date Analyzed

Dissolved Gases by RSK-175

Analyst: MD

0.00500

Qualifiers: B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



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

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



WO#: 1105100

Analyst: MD

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

Methane 0.0310 0.00500 mg/L 1 5/24/2011

Qualifiers: B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



5/24/2011

mg/L

WO#: 1105100

Date Reported: 5/26/2011

Client: Friedman & Bruya Collection Date: 5/18/2011 2:30:00 PM

**Project**: 105250

Methane

Lab ID: 1105100-006 Matrix: Groundwater

0.0320

Client Sample ID: MW07-20110518

Analyses Result RL Qual Units DF Date Analyzed

Dissolved Gases by RSK-175

Analyst: MD

0.00500

Qualifiers: B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



5/24/2011

mg/L

WO#: 1105100

Date Reported: 5/26/2011

Client: Friedman & Bruya Collection Date: 5/19/2011 10:20:00 AM

**Project**: 105250

Methane

Lab ID: 1105100-007 Matrix: Groundwater

0.0827

Client Sample ID: MW25-20110519

Analyses Result RL Qual Units DF Date Analyzed

Dissolved Gases by RSK-175

Analyst: MD

0.00500

Qualifiers: B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



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

E Value above quantitation range

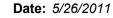
J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit





**Work Order:** 1105100

**CLIENT:** Friedman & Bruya

**Project:** 105250

# **QC SUMMARY REPORT**

**Dissolved Gases by RSK-175** 

F10ject. 100200								
Sample ID: MBLK-100	SampType: MBLK			Units: mg/L		Prep Date: 5/24/2011	RunNo: <b>984</b>	
Client ID: MBLKW	Batch ID: R984					Analysis Date: 5/24/2011	SeqNo: <b>19645</b>	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Re	f Val %RPD RPDLimit	Qual
Methane	ND	0.00500						
Sample ID: LCS 100	SampType: LCS			Units: µg/L		Prep Date: 5/24/2011	RunNo: <b>984</b>	
Client ID: LCSW	Batch ID: R984					Analysis Date: 5/24/2011	SeqNo: <b>19647</b>	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Re	f Val %RPD RPDLimit	Qual
Methane	116	0.00500	100.0	0	116	80 120		
Sample ID: <b>1105100-001ADUP</b>	SampType: <b>DUP</b>			Units: mg/L		Prep Date: 5/24/2011	RunNo: <b>984</b>	
Client ID: <b>CMW05-20110517</b>	Batch ID: R984					Analysis Date: 5/24/2011	SeqNo: <b>19650</b>	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Re	f Val %RPD RPDLimit	Qual
Methane	0.00950	0.00500				0.008	8420 12.1 30	

Qualifiers: E Value above quantitation range

ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

Analyte detected below quantitation limits

RL Reporting Limit

PO#

A-998

# SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl	SUBCONTRACTER Frant
	PROJECT NAME/NO.
Company Friedman and Bruya, Inc.	105250
Address 3012 16th Ave W	
City, State, ZIP Seattle, WA 98119	REMARKS
Phone #_ (206) 285-8282 Fax #_ (206) 283-5044	Please Email Results merdahl@friedmanandbruya.com

Page #_	l	of_	1
TURN	AROU	JND TI	ME
≰Standard o □ RUSH	(2 We	eks)	
Rush charge	s aut	oorized	by:
SAMP	LE D	ISPOS	AL
Dispose af	ter 30	days	
□ Return san	mples		
○ Will call w			ons

		1					ANALYSES REQUESTED						
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	EPII	NPH	Nitrate	Sulfate	Alkalinity	Pissolved Methone	Notes
CMW05-20110517		5/17/11	1115	U		P						×	
MW26-20110517		L'	1310									1	
mw13-20110518		5/18/11	1030										
MW12-20110518			120 %		-								
MW03-201/0518			1335										
MW07-20110518		1	1430				_						
MW25-20110519		5/11/11	1020										
MW12-20110519		↓ ↓	1157	4	-							<b>V</b>	
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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
Relimquished by	Michael Erdahl	Friedman & Bruya	5/19/11	9:00Am.
Received by	M. PLOGEWAY	PAI	5/20/11	1325
Relinquished by:				
Received by:				

SAMPLE CHAIN OF CUSTODY NT 05/19/11 V2/87,

		6 05//	1111
Send Report To C. Cacek R. Bixby	SAMPLERS (signature)		Page #of
Send Report 10 STACCA IV, STACCA	10		TURNAROUND TIME
Company SundEath Strategies	PROJECT NAME/NO.	PO #	B Standard (2 Weeks)
Address 3811 Fairvirw Auc & Stile 2000	Co1Fax/0593		© RUSH
City, State, ZIP Scattle, WA 98107	REMARKS * Menieral Natural Afternation = Sulfate, Sulfice, British, Dissolved Mathane,	CEMO V.	SAMPLE DISPOSAL.  © Dispose after 30 days
Phone # 206, 306, 1907 Fax # 206, 306, 1907	Total K-Nitogen, Phosphorus, Alkalinity, and Total Manganese	GEMSY/ N	☐ Return samples ☐ Will call with instructions
	3		

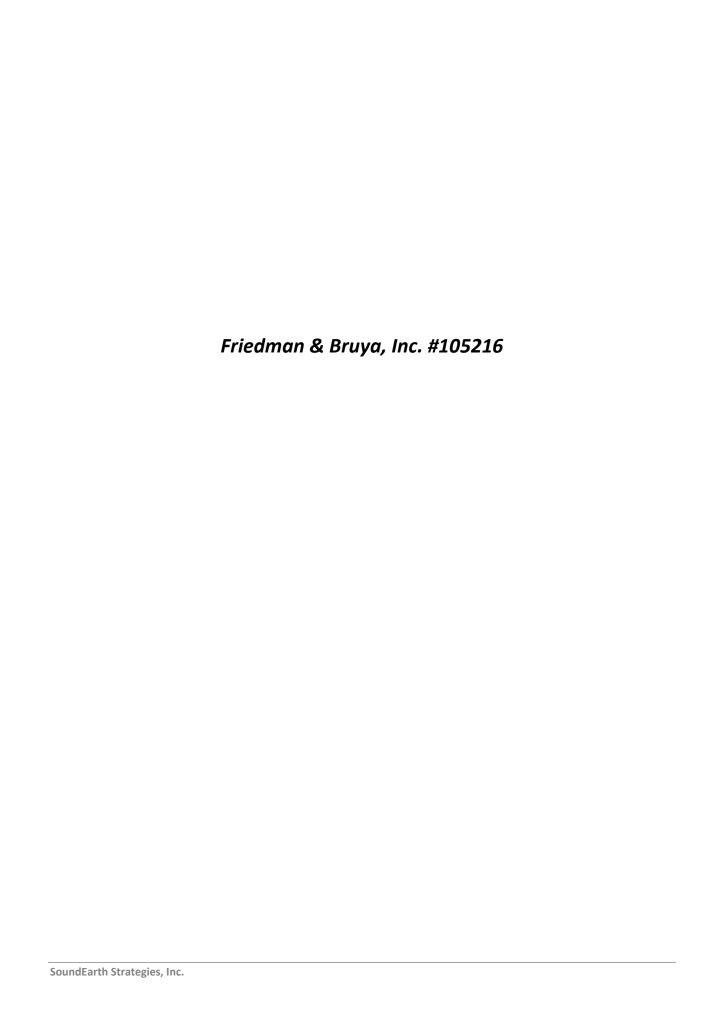
		ļ									ANAI	YSE	S RE(	QUES	TED		20.00
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Monitord Notwell	Nitrodes, Nitroles, TE3+, Total Fe	N	otes
CMW05-2:110517	CMW05 .	lO	UHÉ	5/17/4	1115	H30	5							X		*Sec	Reyer Ks
MW26-20110517	96MM	10	OZ	3111/11	1310	H30	5							X			ì
MW13-20110518	MW13	10	03	5/18/11	1030	H20	5							X			
MW12-20110518	FIMM	10	04	5/18/11	8061	H30	5							X			
MW03-20110518	MW3	9	.05	5/18/11	1333	HAC	5							$\overline{\mathbf{x}}$			1
MW07-20 1105 18	MW07	10	061	5/18/11	1430	H20	5							Ź			<del></del>
MW35-00110519	MW35	9	07 A	5/19/11	1030	HDO	6							$\overline{\times}$	X		
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-Ph. (206) 285-8282

Fax (206) 283-5044

	<u> </u>			
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Mendel	SES	5/9/11	1810
Received by:	Kurt Johnson	F * B	5/19/11	1810
Relinquished by:				***
Received by:				



## 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

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

# **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.

<u>Laboratory ID</u>	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 Client Identification Sampling Date

11-A007071 CMW05-20110517 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

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 Client Identification Sampling Date 11-A007072 MW26-20110517 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	МО	05/27/11
Nitrate	< 0.3	mg/l		0.050	EPA 300.0	МО	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

				ANALYSES REQUESTED													
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX 54 8021B	VOC's by \$260	SVOC's by \$270	RCRA-4 Metals	+8年之	1 Pan 300	- [14] [ M.	Notes
CMW05-20110517		10	01	5/17/11	1115	H90				,				X	$\nabla$		
MW36-20110517	MW36	10	02	5/17/11	1310	H9O								文	文		
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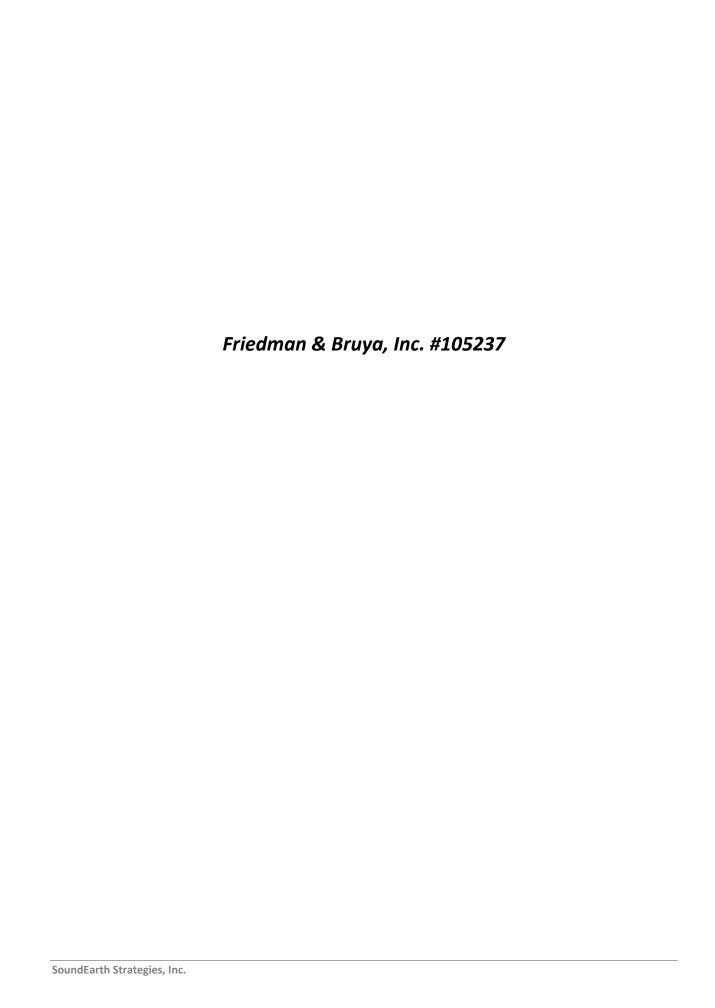
Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-Ph. (206) 285-8282 Fax (206) 283-5044

SIGNATURE COMPANY PRINT NAME DATE TIME Relinquished by: 5/17/11 565 1445 David Mardel Received by: Nhan Phan 0905 FIBI Relinquished by: Received by:

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at \_\_\_\_\_ °C



## 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

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

# **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.

<u>Laboratory ID</u>	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 Client Identification Sampling Date 11-A007219 MW13-20110518 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	МО	06/03/11
Nitrate	2.10	mg/l		0.050	EPA 300.0	МО	06/03/11

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	3.68	mg/l		0.005	EPA 200.7	HL	05/24/11

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AMTEST Identification Number Client Identification Sampling Date 11-A007220 MW12-20110518 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	МО	06/03/11
Nitrate	0.630	mg/l		0.050	EPA 300.0	МО	06/03/11

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	3.02	mg/l		0.005	EPA 200.7	HL	05/24/11

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AMTEST Identification Number Client Identification Sampling Date 11-A007221 MW03-20110518 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	МО	06/03/11
Nitrate	0.390	mg/l		0.050	EPA 300.0	МО	06/03/11

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Iron	13.5	mg/l		0.005	EPA 200.7	HL	05/24/11

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AMTEST Identification Number Client Identification Sampling Date 11-A007222 MW07-20110518 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	МО	06/03/11
Nitrate	0.558	mg/l		0.050	EPA 300.0	МО	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



QC Summary for sample numbers: 11-A007219 to 11-A007222

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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	<b>RECOVERY</b>
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	ma/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

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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**

UNITS	RESULT
mg/l	< 0.05
mg/l	< 0.05
mg/l	< 0.005
mg/l	< 0.01
	mg/l mg/l mg/l

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SAMPLE CHAIN OF CUSTODY ME 05/19/1/ SAMPLERS (signature) Page # Send Report To Cacek TURNAROUND TIME Company Sund Earth Strategis PROJECT NAME/NO. Standard (2 Weeks) PO# D RUSH Colfax/0592 Address 2811 Fairvirw Aux E Snitz 2000 Rush charges authorized by: REMARKS City, State, ZIP Seath, WA 98102 SAMPLE DISPOSAL & Dispose after 30 days GEMS Y / Phone # 206, 306, 1900 Fax # 806, 306, 1907 ☐ Return samples N

									ANALYSES REQUESTED							
Sample ID	Sample Location	Sam ple 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	とおけること	Fe 3+ and Total Fc	Notes
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MM19-55110218		lo	02	5/18/11	1908	HOC								X	X	
8KOVIE-EOWM		9	03	5/18/11	(333	H90	(		1					X	X	
MW07-2EU0518	MWOT	10	οч	511811	1430	HDO	1							R	又	
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Friedman & Bruva, Inc. 3012 16th Avenue West

Seattle, WA 98119aaaa Ph. (206) 285-8282

Fax (206) 283-5044

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SIGNATURE	PRINT NAME	COMPANY	DATE TIME
Relinquished by:	David Mondel	SES	5/18/11 1500
Received by: My and	Nhan shan	FEBI	5/19/11 0900
Relinquished by:			
Received by:			- VA
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☐ Will call with instructions