



SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

RECEIVED

JUL 08 2013

DEPT OF ECOLOGY
TCP - NWRO

July 2, 2013

Mr. Dale Myers
Washington State Department of Ecology
Toxic Cleanup Program, NWRO
3190 160th Avenue Southeast
Bellevue, Washington 98008

SUBJECT: REQUEST FOR OPINION
Mastermark Printing Property
6545 Fifth Avenue South
Facility/Site No.: 18068
VCP Project No.: NW2489

Dear Mr. Myers:

Enclosed please find the *Summary of Injection Pilot Study*, dated June 21, 2013, for the Mastermark Printing Property located at 6545 Fifth Avenue South in Seattle, Washington. Two investigations conducted in 2010 and 2011 have confirmed the presence of elevated concentrations of vinyl chloride in groundwater beneath the central portion of the Mastermark Printing Property. Historically, the highest concentration of vinyl chloride in groundwater was 2.9 micrograms per liter in one well in June 2011. An injection pilot study was conducted to evaluate whether injecting oxidizers and edible oil into the subsurface was a feasible cleanup alternative for treating low-level vinyl chloride concentrations. Results of the pilot study indicate that the injections reduced the concentrations of vinyl chloride, although the concentrations were still above the Model Toxics Control Act Method A cleanup levels. However, the concentrations of vinyl chloride have been below the groundwater screening level protective of vapor intrusion over the past three groundwater sampling events. Based on SoundEarth's review of applicable remedial approaches, technologies that can effectively treat low-level concentrations of vinyl chloride in groundwater to below the Model Toxics Control Act Method A cleanup level do not currently exist. Considering the current and future land use, as well as the reduced vinyl chloride concentrations and limited exposure pathways, we are requesting an opinion on the sufficiency of our cleanup actions.

Respectfully,

SoundEarth Strategies, Inc.

A handwritten signature in blue ink, appearing to read 'Erin K. Rothman', is written over a circular stamp or watermark.

Erin K. Rothman, MS
Principal Scientist

Attachments: *Summary of Injection Pilot Study*, SoundEarth 2013

PJK:EKR



SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

June 21, 2013

Mr. Sam Farrazaino
Equinox Development Unlimited, LLC
6545 Fifth Avenue South
Seattle, Washington 98108

SUBJECT: SUMMARY OF INJECTION PILOT STUDY
Mastermark Printing Property
6545 Fifth Avenue South
Seattle, Washington
SoundEarth Project Number 0761-001-04

Dear Mr. Farrazaino:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this summary letter to document and discuss the results of an injection pilot study conducted at the Mastermark Printing property located at 6545 Fifth Avenue South in Seattle, Washington (the Property). The location of the Property is shown on Figure 1.

Based on a review of historical information, the Property was first developed with a machine shop in 1941. Mastermark Printing operated at the Property from 1970 to approximately 2000. The ground floor of the Property is currently occupied by a woodshop, several blacksmithing and metal fabrication spaces, and sculpture and painting studios. The mezzanine is occupied by multiple art studios used for photography, painting, and sculpting. The Property is located in the Greater Duwamish Manufacturing and Industrial Center south of downtown Seattle. Surrounding parcels are and have been used for both heavy and light industrial purposes since the original tideflats were filled in and developed in the early 1900s.

The results of previous investigations performed by SoundEarth in August 2010, April 2011, and July 2011 confirmed the presence of trace concentrations of vinyl chloride (VC) in groundwater beneath the central portion of the Property. Vinyl chloride was not detected in soil. During these investigations, concentrations of additional chlorinated solvents were below their respective laboratory reporting limits and/or the Washington State Model Toxics Control Act (MTCA) Method A cleanup levels in the soil samples and in the groundwater samples collected from all of the borings and monitoring wells at the Property.

According to Washington State Department of Ecology's (Ecology) *Guidelines for Property Cleanups Under the Voluntary Cleanup Program* dated July 2008, a site is defined by the nature and extent of contamination associated with one or more releases of hazardous substances prior to any cleanup of that contamination. Based on this definition of a site and that provided in Section 200 of Chapter 340 of Title 173 of the Washington Administrative Code, the Mastermark Printing site (the Site) appears to be limited to VC-contaminated groundwater beneath the central portion of the Property. Because no soil

contamination was identified during any of the investigations conducted at the Site, the source of the contamination has not been confirmed. However, based on surrounding historical land use and the relatively low concentrations of VC detected in groundwater, it is possible that the VC detected in MW03 represents the edge of a larger, upgradient plume.

The purpose of the pilot study was to evaluate whether injecting oxidizers and edible oil into the subsurface was a feasible cleanup alternative for treating the low-level VC concentrations identified in groundwater in and surrounding monitoring well MW03.

This summary letter presents a description of field activities performed during the 2012 and 2013 pilot study, which included two injection events and several groundwater monitoring events. The groundwater monitoring events were conducted to assess the effectiveness of the injections and to evaluate the environmental quality, flow direction, and gradient of groundwater beneath the Site. Also included in this summary letter is an exposure pathway analysis to preliminarily evaluate the risks, if any, posed through each exposure pathway to human health and the environment.

INJECTION EVENTS

SoundEarth personnel conducted injection events in April 2012 and January 2013. Prior to conducting each of the injection events, SoundEarth registered the Site with Ecology's Underground Injection Control (UIC) Program. The Site was authorized as UIC Well Registration #31624, which allowed for the injection of sodium persulfate, sodium hydroxide, and hydrogen peroxide into monitoring wells MW02 and MW03. In subsequent email correspondence with Ecology, the UIC Well Registration #31624 was revised to include the injection edible oil and/or lactate substrate. The field activities are summarized below.

2012 Injection Event

On April 3, 2012, SoundEarth personnel conducted an injection event at the Site. The injection event included measuring depth to water and groundwater parameters in monitoring wells MW01, MW02, and MW03; mixing a batch of sodium persulfate and hydrogen peroxide; and injecting the mixture into monitoring well MW03.

Upon arrival at the Site, SoundEarth personnel opened monitoring wells MW01, MW02, and MW03 and allowed the wells to equilibrate with atmospheric pressure for a minimum of 15 minutes. Depth to water was then measured in each well and a downhole water quality meter was used to measure pH, dissolved oxygen (DO), and oxygen-reduction potential (ORP) of the groundwater within each well.

Using a pre-fabricated injection skid equipped with a mechanical pump, SoundEarth personnel then mixed a batch consisting of 55 pounds of sodium persulfate, 12 gallons of hydrogen peroxide, and approximately 150 gallons of water. The batch was injected into monitoring well MW03 with a wellhead pressure of approximately 1 pound per square inch (psi). Following injection of the chemical mixture, a rinse batch containing approximately 100 gallons of water was injected using the same method to aid the transport of the injectate into the subsurface.

Following the injections, depth to water was measured in all monitoring wells and pH, DO, and ORP were measured within monitoring wells MW01 and MW02. Groundwater parameters were not measured in monitoring well MW03 because of the presence of the injectate.

2013 Injection Event

On January 23, 2013, SoundEarth personnel conducted an injection event at the Site. The injection event included collecting groundwater samples from monitoring wells MW01 and MW03, mixing a batch of edible oil substrate, and injecting the mixture into monitoring well MW03.

Upon arrival at the Site, SoundEarth personnel collected groundwater samples from monitoring wells MW01 and MW03 and delivered them to Friedman & Bruya, Inc., of Seattle, Washington, for laboratory analysis. The groundwater sample from monitoring well MW01 was submitted for laboratory analysis of oil and grease by U.S. Environmental Protection Agency (EPA) Method 1664. The groundwater sample from monitoring well MW03 was submitted for laboratory analysis of selected chlorinated volatile organic compounds (CVOCs) by EPA Method 8260C.

Using a pre-fabricated injection skid equipped with a mechanical pump, SoundEarth personnel then mixed a batch consisting of approximately 24.4 gallons of soybean oil and 125 gallons of water. The batch was injected into monitoring well MW03 with a wellhead pressure of approximately 4.5 psi. Following injection of the injectate, a rinse batch containing approximately 50 gallons of water was injected using the same method to aid the transport of the injectate into the subsurface.

Laboratory analytical results from the groundwater samples were compared to applicable MTCA Method A cleanup levels (cleanup levels). VC was detected in the groundwater sample collected from monitoring well MW03 at a concentration exceeding the applicable cleanup level. The oil and grease concentration in the groundwater sample collected from monitoring well MW01 was below the laboratory reporting limit.

GROUNDWATER MONITORING EVENTS

SoundEarth personnel conducted groundwater monitoring events at the Site on June 1, 2012, August 10, 2012, February 22, 2013, and May 21, 2013. The field activities, analytical methods, and results are summarized below.

Field Activities

Upon arrival at the Site for each groundwater monitoring event, SoundEarth personnel opened monitoring wells MW01 through MW03 in order to allow water levels to equilibrate with atmospheric pressure for a minimum of 15 minutes before groundwater level measurements were obtained. Groundwater levels were measured to an accuracy of 0.01 feet using an electronic water level meter. Groundwater samples were collected in accordance with the EPA *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (April 1996). Purging and sampling of the groundwater were performed using a peristaltic pump and dedicated polyethylene tubing at a flow rate between 100 and 220 milliliters per minute. The tubing intake was placed approximately 2.5 to 3 feet below the surface of the groundwater, or mid-screen, in each well. Groundwater parameters, including pH, DO, specific conductance, ORP, turbidity, and temperature, were monitored during purging. Purging continued until the minimum subset of pH, DO, and specific conductance or turbidity had stabilized within established

ranges. Groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Samples were individually labeled, placed on ice, and transported to the laboratory under standard chain-of-custody protocols.

Groundwater Sample Analysis

Groundwater samples were delivered to Friedman & Bruya, Inc., of Seattle, Washington, for laboratory analysis of selected CVOCs by EPA Method 8260C. During the monitoring events, groundwater samples collected from selected monitoring wells were analyzed for sulfate by Method SM184500S04E and/or oil and grease by EPA Method 1664 in accordance with UIC Well Registration #31624.

All non-dedicated field sampling equipment was cleaned and decontaminated between uses and prior to leaving the Property. Purge water was contained on the Property in appropriately labeled drums pending waste profiling and proper disposal.

Results

Historically and during the 2012 groundwater monitoring events, the Site exhibited a flat groundwater gradient with a very slight flow direction toward the west/southwest. During the February 2013 groundwater monitoring event, the groundwater level measured in monitoring well MW03 appeared anomalous. This is attributed to the effects of the injection event that was completed in that monitoring well in January 2013.

The contours measured in May 2013 indicate a general groundwater flow direction toward the southwest with a hydraulic gradient of approximately 0.002 feet per foot. The historical general flow direction and the groundwater elevation contours from the May 2013 groundwater monitoring event are shown on Figure 2.

Analytical results for the groundwater monitoring events are presented in Figure 3 and Table 1. Copies of the laboratory analytical reports are provided in Attachment A. Laboratory analytical results from the monitoring events were compared to the MTCA Method A cleanup levels for unrestricted land use for groundwater and are summarized below:

- No CVOCs were detected above the laboratory reporting limits in the groundwater samples collected from monitoring wells MW01 and MW02 during any of the groundwater monitoring events.
- A concentration of VC above the cleanup level was detected in the groundwater sample collected from monitoring well MW03 in June 2012, August 2012, January 2013, and May 2013. The other CVOCs were below their respective cleanup levels and/or laboratory reporting limits.
- Concentrations of CVOCs, including VC, were below their respective cleanup levels and/or laboratory reporting limits in the groundwater samples collected from monitoring well MW03 in February 2013.
- The concentrations of sulfate in the groundwater samples collected from monitoring wells MW01, MW02, and MW03 were below the Water Quality Criteria for Ground Water of the State of Washington, as cited in UIC Well Registration #31624.

- The concentrations of oil and grease in the groundwater samples collected from monitoring well MW01 in February and May 2013 were below the laboratory reporting limit.

Data Interpretation

Analytical results indicated that the injection of oxidizers in April 2012 was insufficient in reducing VC concentrations below the MTCA Method A cleanup level of 0.2 micrograms per liter ($\mu\text{g/L}$). Following the injection of edible oil in January 2013, VC concentrations dropped below the laboratory detection limit and the MTCA Method A cleanup level. However, VC concentrations rebounded to a concentration slightly above the MTCA Method A cleanup level approximately 1 month following the edible oil injection. Based on these results, remedial injections are not a feasible cleanup alternative for low level concentrations of VC. In addition, based on SoundEarth's extensive review of applicable remedial approaches, technologies that can effectively treat low-level VC concentrations in groundwater to below the MTCA Method A cleanup level do not currently exist.

EXPOSURE PATHWAY EVALUATION

SoundEarth prepared this exposure pathway evaluation to determine risk to human health and the environment as a result of the low-level concentrations of VC in groundwater beneath the Site. This evaluation will discuss the soil, groundwater, and vapor exposure pathways as they relate to the Site.

Soil Pathway

Potential exposure pathways for soil contamination include volatilization into soil vapor and subsequent exposure through the vapor pathway or via the direct contact pathway, which comprises direct contact via dermal contact with and/or ingestion of soil beneath the Site. Concentrations of chlorinated solvents, including VC, are below their respective laboratory reporting limits in all soil samples collected at the Site. Therefore, the soil pathway is incomplete.

Groundwater Pathway

Groundwater is affected by releases directly into a groundwater-bearing zone or by unsaturated soil contamination desorbed from the soil particles by infiltrating surface water or seasonally high groundwater conditions. Potential exposure pathways for groundwater contamination include volatilization into soil vapor and subsequent exposure through the vapor pathway, which comprises both the dermal contact and ingestion pathways. No groundwater supply wells at or in the vicinity of the Site are used for potable water supply. The primary water-bearing zone underlying the Site may qualify as a potential future source of potable water; however, because of the availability of municipal water supplies in the Site vicinity and the industrial nature of the area, there is a low probability that groundwater in the primary water-bearing zone at the Site or adjoining parcels would be used as a potable water source, and the groundwater pathway is incomplete.

Vapor Pathway

The air-filled pore space between soil grains in the unsaturated zone or partially saturated zone is referred to as soil gas or soil vapor. Soil vapor can become contaminated from volatilization of a chlorinated solvent source, specifically from a nonaqueous phase liquid but also from chlorinated solvents adsorbed to soil mineral surfaces and, to a lesser degree, dissolved in groundwater. Ecology's draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial*

Action, dated October 2009, provides guidance for evaluating soil vapor intrusion (VI) risks into structures, which includes generic chemical-specific screening levels for both groundwater and soil vapor that are protective of human health.

The groundwater screening levels for VI are appropriately used for a screening level evaluation of the risk of vapor intrusion for future land use. The referenced guidance indicates that when conducting a Tier 1 evaluation of VI risk, the maximum measured groundwater concentrations should be compared to the screening levels. Over seven groundwater monitoring events, concentrations of VC in groundwater ranged from <0.2 µg/L to 2.9 µg/L. Concentrations exceeded the screening level during three of the seven events. The maximum detected COC concentrations and the associated groundwater screening level protective of indoor air from the 2009 guidance document are summarized in the following table.

Chemical of Concern	Maximum Detected Concentration in Groundwater (µg/L)	Groundwater Screening Level Protective of the Vapor Intrusion Pathway (µg/L)
Vinyl chloride	2.9	0.35

µg/L = micrograms per liter

A comparison of the maximum detected VC concentration in groundwater samples collected from monitoring well MW03 with the respective VI screening level indicates that there would be a potential VI risk from VC under the standard exposure scenarios involving a slab-on-grade, crawl space, or full basement construction on the Property. However, if further monitoring suggests that concentrations remain below the screening level, as they have over the past three quarters, the vapor pathway would be incomplete.

CONCLUSIONS

Based on the results of previous investigations and ongoing groundwater monitoring conducted at the Site, a small plume of VC-contaminated groundwater underlies a portion of the Property. Concentrations typically range from 0.2 µg/L to 0.50 µg/L; however, the highest concentration identified was 2.9 µg/L, which was from a groundwater sample collected in July 2011. The fluctuations in VC concentrations do not appear correlated to groundwater elevation, and the source of the contamination has not been identified.

Pilot tests evaluating two remedial approaches were conducted at the Site:

- **In situ chemical oxidation.** In situ chemical oxidation, which has been proven to be an effective chemical oxidant for the degradation of chlorinated solvents, was implemented in an effort to chemically break down the VC in the groundwater. Successful chemical oxidation requires that each molecule of VC come into contact with the oxidizing compounds. However, considering the low concentrations of VC in groundwater and the data collected subsequent to the pilot test, achieving direct contact between the oxidant and the VC appears infeasible.
- **Reductive dechlorination.** Reductive dechlorination is a proven remedial technology for chlorinated solvents. The fermentation of edible oil by indigenous microorganisms injected

June 21, 2013

into the groundwater produces a rapid and significant reduction in dissolved oxygen concentrations in the saturated zone. This provides the strongly negative oxidation/reduction potential necessary to treat VC by reductive dechlorination. The anaerobic zone extends far beyond the radius of influence of the edible oil itself, enhances attenuation of contaminants both upgradient and crossgradient of the active treatment zone, and serves as a barrier around the periphery of the treatment zone, which mitigates the migration of contaminated groundwater beyond Site boundaries. Reductive dechlorination is a biotic process completed by anaerobic bacteria. Complete dechlorination of VC produces nontoxic chloride, ethene, and ethane gas. However, as with chemical oxidation, reductive dechlorination requires the VC (or other chlorinated solvents) to be present at sufficient concentrations to allow the anaerobic bacteria to find and consume the VC. Although it may be too soon to tell, reductive dechlorination may not be sufficient to reduce the concentrations of VC to levels that are below the MTCA Method A cleanup level.

The absence of VC in soil, the incomplete exposure pathways, and the relatively low concentrations of VC in groundwater in only one area of the Property, as well as the limited options available to fully treat these concentrations suggests that no further action appears warranted at this time.

LIMITATIONS

The findings and conclusions documented in this report have been prepared for the specific application to this project and have been 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 unknown, unidentified, or unforeseen subsurface contamination to exist on portions of the Property that were not accessed in the course of this investigation. No warranty, expressed or implied, is made. This report is intended for the exclusive use of Equinox Development Unlimited, LLC.

CLOSING

SoundEarth appreciates the opportunity to work with you on this project. Please contact the undersigned at (206) 306-1900 if you have any questions or require additional information.

Respectfully,
SoundEarth Strategies, Inc.

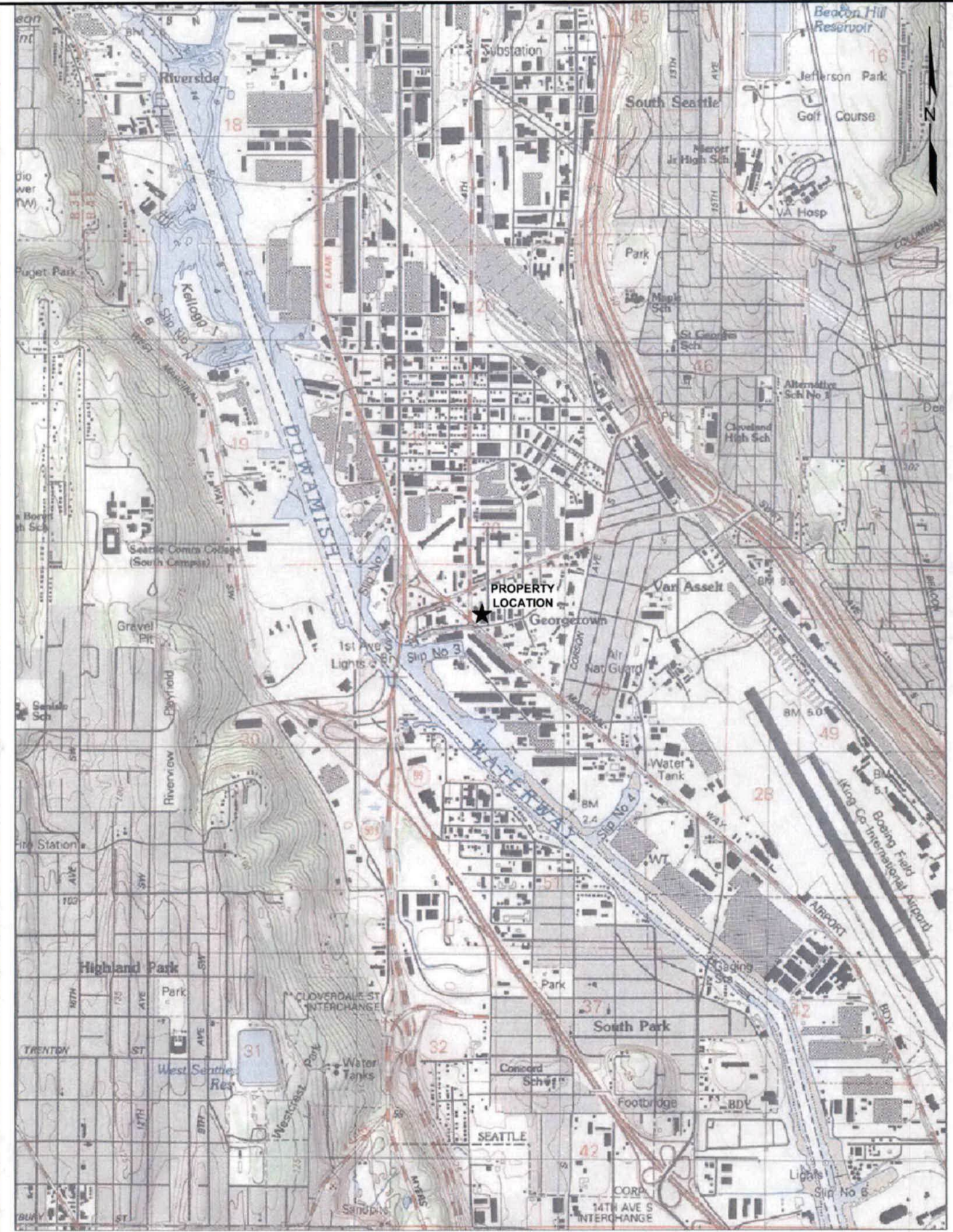


Pete Kingston, LG #2921
Project Geologist



Erin K. Rothman, MS
Principal Scientist

P:10761 EQUINOX DEVELOPMENT UNLIMITED\0761-001 FORMER MASTERMARK PRINTING\TECHNICAL\CAD\FIGURE 10761-001_FIG 1_F.DWG



Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

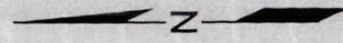
APPROXIMATE SCALE: 1:24,000



DATE: 04/29/11
 DRAWN BY: V. BACHMANN
 CHECKED BY: E. ROTHMAN
 CAD FILE: 0761-001_FIG 1

PROJECT NAME: FORMER MASTERMARK PRINTING
 PROJECT NUMBER: 0761-001
 STREET ADDRESS: 6545 5TH AVENUE SOUTH
 CITY, STATE: SEATTLE, WASHINGTON

FIGURE 1
 PROPERTY LOCATION MAP



LEGEND	
	MONITORING WELL
	PROPERTY BOUNDARY
	PARCEL BOUNDARY
	SEWER LINE
	0.05-FOOT INTERVAL GROUNDWATER CONTOUR
	GROUNDWATER ELEVATION
	GROUNDWATER FLOW DIRECTION (MAY 21, 2013)
	GENERAL HISTORICAL FLOW DIRECTION



DATE: 05/29/13
 DRAWN BY: JQC/NAC
 CHECKED BY: PJK
 CAD FILE: 0761-001_2013Q2_CM

PROJECT NAME: FORMER MASTERMARK PRINTING
 PROJECT NUMBER: 0761-001
 STREET ADDRESS: 6545 FIFTH AVENUE SOUTH
 CITY, STATE: SEATTLE, WASHINGTON

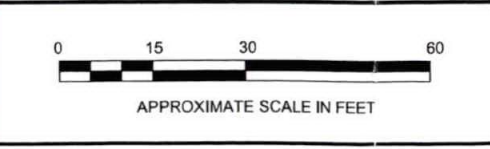
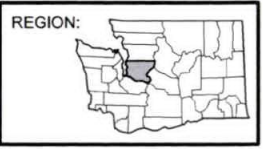


FIGURE 2
 GROUNDWATER CONTOUR MAP
 (MAY 21, 2013)

Well ID	Sample Date	Vinyl Chloride	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
MW02	04/06/11	<0.2	<1	<1	<1	<1
	07/20/11	<0.2	<1	<1	<1	<1
	06/01/12	<0.2	NS	NS	NS	NS
	08/10/12	<0.2	<1	<1	<1	<1
	02/22/13	<0.2	<1	<1	<1	<1
	05/21/13	<0.2	<1	<1	<1	<1
MTCA Method A Cleanup Level		0.2	160	16	5	5

Well ID	Sample Date	Vinyl Chloride	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
MW03	04/06/11	0.26	<1	2.4	2.3	<1
	07/20/11	2.9	<1	3.6	2.6	<1
	06/01/12	0.50	NS	NS	NS	NS
	08/10/12	0.44	<1	<1	1.2	<1
	01/23/13	0.22	1.2	1.2	1.9	<1
	02/22/13	<0.2	<1	<1	<1	<1
	05/21/13	0.22	<1	1.0	<1	<1
MTCA Method A Cleanup Level		0.2	160	16	5	5

Well ID	Sample Date	Vinyl Chloride	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
MW01	04/06/11	<0.2	<1	<1	<1	<1
	07/20/11	<0.2	<1	<1	<1	<1
	06/01/12	<0.2	NS	NS	NS	NS
	08/10/12	<0.2	<1	<1	<1	<1
	02/22/13	<0.2	<1	<1	<1	<1
	05/21/13	<0.2	<1	<1	<1	<1
MTCA Method A Cleanup Level		0.2	160	16	5	5

LEGEND

- MW02 MONITORING WELL
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE
- GROUNDWATER FLOW DIRECTION (MAY 21, 2013)
- RED** DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
- < RESULT BELOW LABORATORY REPORTING LIMIT
- NS NOT SAMPLED



DATE: 05/29/13
 DRAWN BY: JQC/NAC
 CHECKED BY: PJK
 CAD FILE: 0761-001_2013Q2_GD

PROJECT NAME: FORMER MASTERMARK PRINTING
 PROJECT NUMBER: 0761-001
 STREET ADDRESS: 6545 FIFTH AVENUE SOUTH
 CITY, STATE: SEATTLE, WASHINGTON

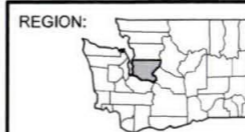


FIGURE 3
GROUNDWATER ANALYTICAL RESULTS

TABLE



Table 1
Summary of Groundwater Data
Former Mastermark Printing Property
6555 5th Avenue South
Seattle, Washington

Well ID	Date	Depth to Groundwater ⁽¹⁾ (feet)	Groundwater Elevation ⁽²⁾ (feet)	Analytical Results (µg/L)				
				Vinyl Chloride	trans-1,2-Dichloroethylene	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
MW01 TOC: 97.60 feet	04/06/11	5.71	91.89	<0.2	<1	<1	<1	<1
	07/20/11	6.72	90.88	<0.2	<1	<1	<1	<1
	06/01/12	7.21	90.39	<0.2	--	--	--	--
	08/10/12	7.32	90.28	<0.2	<1	<1	<1	<1
	02/22/13	6.56	91.04	<0.2	<1	<1	<1	<1
	05/21/13	7.16	90.44	<0.2	<1	<1	<1	<1
MW02 TOC: 96.54 feet	04/06/11	4.59	91.95	<0.2	<1	<1	<1	<1
	07/20/11	5.54	91.00	<0.2	<1	<1	<1	<1
	06/01/12	5.81	90.73	<0.2	--	--	--	--
	08/10/12	6.01	90.53	<0.2	<1	<1	<1	<1
	02/22/13	5.35	91.19	<0.2	<1	<1	<1	<1
	05/21/13	5.81	90.73	<0.2	<1	<1	<1	<1
MW03 TOC: 95.11 feet TOC: 95.01 feet	04/06/11	3.17	91.94	0.26	<1	2.4	2.3	<1
	07/20/11	4.21	90.90	2.9	<1	3.6	2.6	<1
	06/01/12	4.66	90.35	0.50	--	--	--	--
	08/10/12	4.81	90.20	0.44	<1	<1	1.2	<1
	01/23/13	--	--	0.22	<1	1.2	1.9	<1
	02/22/13	8.50	86.51	<0.2	<1	<1	<1	<1
05/21/13	4.39	90.62	0.22	<1	1.0	<1	<1	
MTCA Cleanup Level for Groundwater				0.2^(a)	160^(b)	16^(b)	5^(a)	5^{(a)72}

NOTES:

Red denotes concentration in excess of MTCA Method A Cleanup Level for Groundwater.

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

Analyzed by U.S. Environmental Protection Agency Method 8260C.

⁽¹⁾ As measured in feet below a fixed spot on the well casing rim.

⁽²⁾ Measured relative to a benchmark (top of the fire hydrant at northeast corner of Fifth Avenue South and South River Street) with an assumed elevation of 100.00 feet.

^(a) MTCA Method A Cleanup Levels, Table 720-1, Section 900, Chapter 173-340 of the Washington Administrative Code, revised November 2007.

^(b) MTCA Cleanup Regulation, CLARC, Groundwater, Method B, Non-carcinogen, Standard Formula Value, CLARC Website <<https://fortress.wa.gov/ecy/clarc/CLARHome.aspx>>.

-- = not analyzed; not measured

< = not detected at a concentration exceeding the laboratory reporting limit

µg/L = micrograms per liter

CLARC = Cleanup Levels and Risk Calculations

MTCA = Washington State Model Toxics Control Act

TOC = top of casing elevation

**ATTACHMENT A
LABORATORY ANALYTICAL REPORTS**

Friedman & Bruya, Inc. #206014

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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
e-mail: fbi@isomedia.com

June 13, 2012

Rob Honsberger, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Honsberger:

Included are the results from the testing of material submitted on June 1, 2012 from the SOU_0761-001_20120601, F&BI 206014 project. There are 8 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
SOU0613R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 1, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0761-001_20120601, F&BI 206014 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
206014-01	MW03-20120601
206014-02	MW02-20120601
206014-03	MW01-20120601
206014-04	MW99-20120601

The samples were sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20120601	Client:	SoundEarth Strategies
Date Received:	06/01/12	Project:	SOU_0761-001_20120601, F&BI 206014
Date Extracted:	06/05/12	Lab ID:	206014-01
Date Analyzed:	06/05/12	Data File:	060508.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.50

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW02-20120601	Client:	SoundEarth Strategies
Date Received:	06/01/12	Project:	SOU_0761-001_20120601, F&BI 206014
Date Extracted:	06/05/12	Lab ID:	206014-02
Date Analyzed:	06/05/12	Data File:	060509.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW01-20120601
Date Received: 06/01/12
Date Extracted: 06/05/12
Date Analyzed: 06/05/12
Matrix: Water
Units: ug/L (ppb)

Client: SoundEarth Strategies
Project: SOU_0761-001_20120601, F&BI 206014
Lab ID: 206014-03
Data File: 060510.D
Instrument: GCMS9
Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW99-20120601
Date Received: 06/01/12
Date Extracted: 06/05/12
Date Analyzed: 06/05/12
Matrix: Water
Units: ug/L (ppb)

Client: SoundEarth Strategies
Project: SOU_0761-001_20120601, F&BI 206014
Lab ID: 206014-04
Data File: 060511.D
Instrument: GCMS9
Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.52

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0761-001_20120601, F&BI 206014
Date Extracted:	06/05/12	Lab ID:	02-0810 mb
Date Analyzed:	06/05/12	Data File:	060516.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2

Date of Report: 06/13/12
 Date Received: 06/01/12
 Project: SOU_0761-001_20120601, F&BI 206014

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
 SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 206026-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	98	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	94	96	70-130	2

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

206014

SAMPLE CHAIN OF CUSTODY

ME 06-01-12 AI3/V8

Send Report To: Rob Honsberger

Company: SoundEarth Strategies

Address: 2811 Fairview Ave E, Suite 200

City, State, ZIP: Seattle, WA 98102

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

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. Former Mastermark Printing, 0761-001 PO # _____

REMARKS _____ GEMS Y / N _____

Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)

RUSH _____

Rush charges authorized by: _____

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED							Notes	
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-9 Metals	Sulfate		Vinyl Chloride
nw03-20120601	mw03	10'	01 A-C	6/1/12	1131	H ₂ O	3							X	X	
nw02-20120601	mw02	08.5'	02 T	6/1/12	1211	H ₂ O	3							X	X	
nw01-20120601	mw01	10'	03	6/1/12	1324	H ₂ O	3							X	X	
nw99-20120601	mw99	10'	04	6/1/12	1135	H ₂ O	3							X	X	
<i>wrk</i>																

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: <u>[Signature]</u>	Will CAMARDA	SES	6/1/12	1450
Received by: <u>[Signature]</u>	DO VO	FYBZ	"	1/
Relinquished by:				
Received by:		Samples received at <u>6</u> °C		

Aquatic Research Inc. #FBI010-22



AQUATIC RESEARCH INCORPORATED
LABORATORY & CONSULTING SERVICES
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103
PHONE: (206) 632-2715 FAX: (206) 632-2417

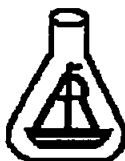
CASE FILE NUMBER:	FBI010-22	PAGE 1
REPORT DATE:	06/08/12	
DATE SAMPLED:	06/01/12	DATE RECEIVED: 06/05/12
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER		
SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 206014		

CASE NARRATIVE

Four 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 the subsequent pages.

SAMPLE DATA

SAMPLE ID	SULFATE (mg/L)
MW03-20120601	126
MW02-20120601	38.6
MW01-20120601	13.6
MW99-20120601	122



AQUATIC RESEARCH INCORPORATED
LABORATORY & CONSULTING SERVICES
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103
PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	FBI010-22	PAGE 3
REPORT DATE:	06/08/12	
DATE SAMPLED:	06/01/12	DATE RECEIVED: 06/05/12
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER		
SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 206014		

QA/QC DATA

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/07/12
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	18.4
DUPLICATE	18.2
RPD	1.26%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	18.4
SPIKED SAMPLE	28.2
SPIKE ADDED	10.0
% RECOVERY	97.33%
QC CHECK	
FOUND	9.95
TRUE	10.0
% RECOVERY	99.51%
BLANK	<1.00

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:

Damien Gadowski
Project Manager

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

FB1010-22

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

SUBCONTRACTOR <i>Aq. Research</i>	
PROJECT NAME/NO. 206014	PO # B-773
REMARKS Please Email Results	

Page # <u>1</u> of <u>1</u>
TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 80 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	Notes
MW03-20120601		6/1/12	1131	w						X		
MW02-20120601		↓	1211							X		
MW01-20120601			1324							X		
MW09-20120601			1135							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
<i>[Signature]</i>	Michael Erdahl	Friedman & Bruya	6/4/12	10 AM
<i>[Signature]</i>	S. N. (Erdahl)	LABOR	6/5/12	11:00

Friedman & Bruya, Inc. #208145

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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
e-mail: fbi@isomedia.com

August 14, 2012

Erin Rothman, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Rothman:

Included are the results from the testing of material submitted on August 10, 2012 from the SOU_0761-001_20120810, F&BI 208145 project. There are 8 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: Tom Cammarata
SOU0814R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 10, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0761-001_20120810, F&BI 208145 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
208145-01	MW01-20120810
208145-02	MW02-20120810
208145-03	MW03-20120810
208145-04	MW99-20120810

The 8260C laboratory control sample and laboratory control sample duplicate failed the relative percent difference for chloroethane. The analyte was not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01-20120810	Client:	SoundEarth Strategies
Date Received:	08/10/12	Project:	SOU_0761-001_20120810, F&BI 208145
Date Extracted:	08/10/12	Lab ID:	208145-01
Date Analyzed:	08/10/12	Data File:	081009.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW02-20120810	Client:	SoundEarth Strategies
Date Received:	08/10/12	Project:	SOU_0761-001_20120810, F&BI 208145
Date Extracted:	08/10/12	Lab ID:	208145-02
Date Analyzed:	08/10/12	Data File:	081010.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20120810	Client:	SoundEarth Strategies
Date Received:	08/10/12	Project:	SOU_0761-001_20120810, F&BI 208145
Date Extracted:	08/10/12	Lab ID:	208145-03
Date Analyzed:	08/10/12	Data File:	081011.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	96	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.44
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.2
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20120810	Client:	SoundEarth Strategies
Date Received:	08/10/12	Project:	SOU_0761-001_20120810, F&BI 208145
Date Extracted:	08/10/12	Lab ID:	208145-04
Date Analyzed:	08/10/12	Data File:	081012.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.45
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.2
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0761-001_20120810, F&BI 208145
Date Extracted:	08/10/12	Lab ID:	02-1377 mb
Date Analyzed:	08/10/12	Data File:	081006.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/14/12

Date Received: 08/10/12

Project: SOU_0761-001_20120810, F&BI 208145

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 208145-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	94	36-166
Chloroethane	ug/L (ppb)	50	<1	113	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	93	60-136
Methylene chloride	ug/L (ppb)	50	<5	92	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	107	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	113	60-146
Trichloroethene	ug/L (ppb)	50	<1	89	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	99	73-129

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	92	91	50-154	1
Chloroethane	ug/L (ppb)	50	110	141	58-146	25 vo
1,1-Dichloroethene	ug/L (ppb)	50	94	92	67-136	2
Methylene chloride	ug/L (ppb)	50	94	89	39-148	5
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	97	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	97	96	79-121	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	102	80-123	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	98	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	108	108	83-130	0
Trichloroethene	ug/L (ppb)	50	92	91	80-120	1
Tetrachloroethene	ug/L (ppb)	50	108	106	76-121	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

208145

SAMPLE CHAIN OF CUSTODY

ME 08-10-12

V1

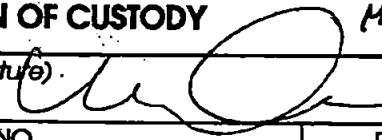
Send Report To Tom Cammarata, Erin Rothman

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) 

PROJECT NAME/NO. Mastermark Printing 0761-001 PO # _____

REMARKS _____ GEMS Y / N _____


Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED						Notes	
								NWTPH-DX	NWTPH-GX	BTEX by 8021B	VOC's by 8260	CVOC's by 8260C	RCRA-8 Metals		
MW01-20120810	MW01	10	01A-D	8/10/12	1212	H2O	4						X		
MW02-20120810	MW02	8.5	02 T	8/10/12	1122	H2O	4						X		
MW03-20120810	MW03	10	03	8/10/12	1038	H2O	4						X		
MW99-20120810	MW99	10	04	8/10/12	1041	H2O	4						X		

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

SIGNATURE 	PRINT NAME <u>WILL CAMARATA</u>	COMPANY <u>SES</u>	DATE <u>8/10/12</u>	TIME <u>1250</u>
Relinquished by: _____	<u>DO NOT</u>	<u>F&BI</u>	<u>11</u>	<u>4</u>
Received by: _____				
Relinquished by: _____				
Received by: _____				

Samples received at 2 °C

Friedman & Bruya, Inc. #301282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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
e-mail: fbi@isomedia.com

February 4, 2013

Erin Rothman, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Rothman:

Included are the results from the testing of material submitted on January 23, 2013 from the SOU_0761_20130123, F&BI 301282 project. There are 7 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
SOU0204R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 23, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0761_20130123, F&BI 301282 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
301282 -01	20130123_MW01
301282 -02	20130123_MW03

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/13
Date Received: 01/23/13
Project: SOU_0761_20130123, F&BI 301282
Date Extracted: 01/30/13
Date Analyzed: 01/31/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR OIL AND GREASE USING EPA METHOD 1664**
Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	<u>Oil and Grease</u>
20130123_MW01 301282-01	<3
Method Blank	<3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	20130123_MW03	Client:	SoundEarth Strategies
Date Received:	01/23/13	Project:	SOU_0761_20130123, F&BI 301282
Date Extracted:	01/23/13	Lab ID:	301282-02
Date Analyzed:	01/23/13	Data File:	012327.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.22
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.2
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.9
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0761_20130123, F&BI 301282
Date Extracted:	01/23/13	Lab ID:	03-0114 mb
Date Analyzed:	01/23/13	Data File:	012307.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/13

Date Received: 01/23/13

Project: SOU_0761_20130123, F&BI 301282

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR OIL AND GREASE
USING EPA METHOD 1664**

Laboratory Code: Laboratory Control Sample

<u>Analyte</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>Percent Recovery LCS</u>	<u>Percent Recovery LCSD</u>	<u>Acceptance Criteria</u>	<u>RPD (Limit 11)</u>
Oil and Grease	mg/L (ppm)	40	101	102	78-114	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/13

Date Received: 01/23/13

Project: SOU_0761_20130123, F&BI 301282

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 301262-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	50	2.0	95	61-139
Chloroethane	ug/L (ppb)	50	<1	88	70-127
1,1-Dichloroethene	ug/L (ppb)	50	<1	89	74-123
Methylene chloride	ug/L (ppb)	50	<5	79	62-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	90	74-123
1,1-Dichloroethane	ug/L (ppb)	50	<1	87	82-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	17	93 b	75-117
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	87	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	91	79-117
Trichloroethene	ug/L (ppb)	50	<1	84	78-108
DRAFTTetrachloroethene	ug/L (ppb)	50	<1	87	70-115

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	50	101	100	73-132	1
Chloroethane	ug/L (ppb)	50	93	92	68-126	1
1,1-Dichloroethene	ug/L (ppb)	50	91	91	75-119	0
Methylene chloride	ug/L (ppb)	50	84	83	66-132	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	91	91	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	88	89	80-116	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	91	90	83-110	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	88	89	80-110	1
1,1,1-Trichloroethane	ug/L (ppb)	50	91	92	80-116	1
Trichloroethene	ug/L (ppb)	50	85	85	77-108	0
Tetrachloroethene	ug/L (ppb)	50	89	89	81-109	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

301282

SAMPLE CHAIN OF CUSTODY

ME 1/23/13 AI 5/1/2 of

Send Report To Erin Rothman
Company SoundEarth Strategies Inc.
Address 2811 Fairview Ave N Suite 2000
City, State, ZIP Seattle, WA 98102
Phone # 206 436 1900 Fax # 206 306 1907

SAMPLERS (signature) *[Signature]*

PROJECT NAME/NO. 0761 PO #
Mastermark

REMARKS

GEMS Y / N

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED								Notes				
								NWTPH-DX	NWTPH-Ox	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Non-Polar EOC's	CNOC's					
20130123.MW01			01	1/23/13	0805	H ₂ O	1													
20130123.MW03			02 A-D	1/23/13	0835	H ₂ O	4													

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2000
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	Robert A. Hunsberger	S&S	1-23-13	1305
Received by: <i>[Signature]</i>	Michael Erdahl	FE pm	↓	↓
Relinquished by:				
Received by:				

Friedman & Bruya, Inc. #302330

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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
e-mail: fbi@isomedia.com

March 5, 2013

Pete Kingston, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Kingston:

Included are the results from the testing of material submitted on February 22, 2013 from the SOU_0761_20130222, F&BI 302330 project. There are 10 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
SOU0305R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 22, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0761_20130222, F&BI 302330 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
302330 -01	MW01-20130222
302330 -02	MW02-20130222
302330 -03	MW03-20130222

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/05/13
Date Received: 02/22/13
Project: SOU_0761_20130222, F&BI 302330
Date Extracted: 02/25/13
Date Analyzed: 02/26/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR OIL AND GREASE (NON-POLAR) USING EPA METHOD 1664**
Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	<u>Oil and Grease (Non-Polar)</u>
MW01-20130222 302330-01	<3
Method Blank	<3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/05/13
Date Received: 02/22/13
Project: SOU_0761_20130222, F&BI 302330
Date Extracted: 02/25/13
Date Analyzed: 02/26/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR OIL AND GREASE USING EPA METHOD 1664**
Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	<u>Oil and Grease</u>
MW01-20130222 302330-01	<3
Method Blank	<3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01-20130222	Client:	SoundEarth Strategies
Date Received:	02/22/13	Project:	SOU_0761_20130222, F&BI 302330
Date Extracted:	02/25/13	Lab ID:	302330-01
Date Analyzed:	02/25/13	Data File:	022527.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW02-20130222	Client:	SoundEarth Strategies
Date Received:	02/22/13	Project:	SOU_0761_20130222, F&BI 302330
Date Extracted:	02/25/13	Lab ID:	302330-02
Date Analyzed:	02/25/13	Data File:	022528.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20130222	Client:	SoundEarth Strategies
Date Received:	02/22/13	Project:	SOU_0761_20130222, F&BI 302330
Date Extracted:	02/25/13	Lab ID:	302330-03
Date Analyzed:	02/25/13	Data File:	022529.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0761_20130222, F&BI 302330
Date Extracted:	02/25/13	Lab ID:	03-0338 mb
Date Analyzed:	02/25/13	Data File:	022507.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/05/13

Date Received: 02/22/13

Project: SOU_0761_20130222, F&BI 302330

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR OIL AND GREASE
USING EPA METHOD 1664**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 11)
Oil and Grease	mg/L (ppm)	40	101	101	78-114	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/05/13

Date Received: 02/22/13

Project: SOU_0761_20130222, F&BI 302330

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302330-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Vinyl chloride	ug/L (ppb)	50	<0.2	110	61-139
Chloroethane	ug/L (ppb)	50	<1	101	70-127
1,1-Dichloroethene	ug/L (ppb)	50	<1	102	74-123
Methylene chloride	ug/L (ppb)	50	<5	104	62-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	94	74-123
1,1-Dichloroethane	ug/L (ppb)	50	<1	106	82-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	75-117
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	79-117
Trichloroethene	ug/L (ppb)	50	<1	92	78-108
Tetrachloroethene	ug/L (ppb)	50	<1	88	70-115

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	50	102	106	73-132	4
Chloroethane	ug/L (ppb)	50	98	100	68-126	2
1,1-Dichloroethene	ug/L (ppb)	50	99	102	75-119	3
Methylene chloride	ug/L (ppb)	50	96	99	66-132	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	92	95	76-118	3
1,1-Dichloroethane	ug/L (ppb)	50	103	106	80-116	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	96	98	83-110	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	101	80-110	5
1,1,1-Trichloroethane	ug/L (ppb)	50	98	101	80-116	3
Trichloroethene	ug/L (ppb)	50	92	96	77-108	4
Tetrachloroethene	ug/L (ppb)	50	90	93	81-109	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

308330

SAMPLE CHAIN OF CUSTODY

ME 02/22/13 12/11/13

Send Report To Pete Kingston

Company Southern Strategies

Address 2811 Fairview Ave E SPOKAC

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1400 Fax # 206.306.1407

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. Westmark / 0761

PO # N

REMARKS

GEMS Y / N

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-DX	NWTPH-CX	BTEX by 8021B	Chlorinated VOCs by 8260	SVOCs by 8270	RCRA-8 Metals	Non-Petroleum FOE	Cutcs w/ Silica gel (None)	Notes
MW01-203022	MW01		01	2/22/13	1045	H2O	5			X	X			X		
MW02-203022	MW02		02		1145		4									
MW03-203022	MW03		03		1235		4									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>[Signature]</u>	David Mendel	SES	2/22/13	1430
<u>[Signature]</u>	Nhan Phan	FBT	2/22/13	1430
Received by:				
Relinquished by:				

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

Friedman & Bruya, Inc. #305408

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Kurt Johnson, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 7, 2013

Pete Kingston, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Kingston:

Included are the results from the testing of material submitted on May 21, 2013 from the SOU_0761-001-04_20130521, F&BI 305408 project. There are 9 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
SOU0607R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 21, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0761-001-04_20130521, F&BI 305408 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
305408 -01	MW01-20130521
305408 -02	MW02-20130521
305408 -03	MW03-20130521

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/13

Date Received: 05/21/13

Project: SOU_0761-001-04_20130521, F&BI 305408

Date Extracted: 05/29/13

Date Analyzed: 05/30/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR OIL AND GREASE USING EPA METHOD 1664**

Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	<u>Oil and Grease</u>
MW01-20130521 305408-01	<6
Method Blank	<3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01-20130521	Client:	SoundEarth Strategies
Date Received:	05/21/13	Project:	SOU_0761-001-04_20130521, F&BI 305408
Date Extracted:	05/22/13	Lab ID:	305408-01
Date Analyzed:	05/22/13	Data File:	052208.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	92	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW02-20130521
Date Received: 05/21/13
Date Extracted: 05/22/13
Date Analyzed: 05/22/13
Matrix: Water
Units: ug/L (ppb)

Client: SoundEarth Strategies
Project: SOU_0761-001-04_20130521, F&BI 305408
Lab ID: 305408-02
Data File: 052209.D
Instrument: GCMS4
Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	91	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20130521	Client:	SoundEarth Strategies
Date Received:	05/21/13	Project:	SOU_0761-001-04_20130521, F&BI 305408
Date Extracted:	05/22/13	Lab ID:	305408-03
Date Analyzed:	05/22/13	Data File:	052210.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	89	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.22
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.0
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0761-001-04_20130521, F&BI 305408
Date Extracted:	05/27/13	Lab ID:	03-0947 mb
Date Analyzed:	05/22/13	Data File:	052207.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	92	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/13

Date Received: 05/21/13

Project: SOU_0761-001-04_20130521, F&BI 305408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR OIL AND GREASE
USING EPA METHOD 1664

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 11)
Oil and Grease	mg/L (ppm)	40	83	89	78-114	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/13

Date Received: 05/21/13

Project: SOU_0761-001-04_20130521, F&BI 305408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 305395-15 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	<0.2	77	66	36-166	15
Chloroethane	ug/L (ppb)	50	<1	90	77	46-160	16
1,1-Dichloroethene	ug/L (ppb)	50	<1	45 ip	41 ip	60-136	9
Methylene chloride	ug/L (ppb)	50	24	46 b	26 b	67-132	56 b
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	52 ip	47 ip	72-129	10
1,1-Dichloroethane	ug/L (ppb)	50	<1	66 ip	57 ip	70-128	15
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	64 ip	57 ip	71-127	12
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	77	68 ip	69-133	12
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	32 ip	31 ip o	60-146	3
Trichloroethene	ug/L (ppb)	50	<1	24 ip	23 ip	66-135	4
Tetrachloroethene	ug/L (ppb)	50	<1	11	8 ip	10-226	32 ip

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	92	94	50-154	2
Chloroethane	ug/L (ppb)	50	102	105	58-146	3
1,1-Dichloroethene	ug/L (ppb)	50	95	93	67-136	2
Methylene chloride	ug/L (ppb)	50	83	81	39-148	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	92	92	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	93	92	79-121	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	91	91	80-123	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	93	94	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	98	100	83-130	2
Trichloroethene	ug/L (ppb)	50	86	87	80-120	1
Tetrachloroethene	ug/L (ppb)	50	91	93	76-121	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

305408

SAMPLE CHAIN OF CUSTODY

ME 05-21-13

ADJ/V21


Send Report to Pete Kingston

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) 

PROJECT NAME/NO. Former Mastermark Printing PO # 0761-001-04

REMARKS



Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED		Notes
								Chlorinated Solvents by EPA 8260C	Oil and Grease (non-polar) by EPA 1664	
MW01-20130521	MW01	10	02A	5/21/13	1209	W	4	X	X	
MW02-20130521	MW02	8.5	02A	5/21/13	1303	W	3	X		
MW03-20130521	MW03	10	03A	5/21/13	1408	W	3	X		
<i>DAN</i>										

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: 	Danny Naylor	SoundEarth	5/21/13	1520
Received by: 	Nhan Phan	FEB I	5/21/13	1520
Relinquished by:				
Received by:				Samples received at <u>6</u> °C



SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

RECEIVED

JUL 08 2013

DEPT OF ECOLOGY
TCP - NWRO

TRANSMITTAL

To: Mr. Dale Myers
Washington State Department of Ecology
3190 160th Avenue Southeast
Bellevue, Washington 98008

Date: July 3, 2013

Project No.: 0761-001-04

Subject: Mastermark Printing Property

We Are Sending:

Quantity:	Description:
<u>1</u>	<u>Summary of Injection Pilot Study, dated June 21, 2013.</u>

For Your:

Use

Approval

Review/Comments

Information

Other

Sent By:

1st Class Mail

FedEx Ground

FedEx Overnight

Courier

Other

Comments:
SoundEarth appreciates the opportunity to work with you on this project. Please contact Erin K. Rothman at (206) 306-1900 if you have any questions or require additional information.

Regards,

Shawna Michelsen
Project Coordinator
SoundEarth Strategies, Inc.