

RCRA Corrective Action

Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: MicroMetrics/Acroflex (formerly Knox Semiconductor) _____

Facility Address: 12 Industrial Park Rd., Rockport, ME _____

Facility EPA ID #: MED071730220 and by mistake also MED981063662 _____

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?
- ☒ x

 If yes - check here and continue with #2 below.
- ☐

 If no - re-evaluate existing data, or
- ☐

 if data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for nonhuman (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors)

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be “contaminated”¹ above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	☐	☒	☐	lack of spill, soil sample results ND
Air (indoors) ²	☐	☒	☐	facility went through closure and cleaned up hazardous residues as certified by independent P.E. and groundwater is not suspected to be contaminated
Surface Soil (e.g., <2 ft)	☐	☒	☐	soil samples ND
Surface Water	☐	☒	☐	VOC and petroleum products analysis of water runoff after fire were ND
Sediment	☐	☒	☐	site soils were ND for contaminants, so considering this and other factors such as a lack of evidence of a release, it does not make sense to sample off site sediments
Subsurf. Soil (e.g., >2 ft)	☐	☒	☐	soil samples ND
Air (outdoors)	☐	☒	☐	not suspected

☒ If no (for all media) - skip to #6, and enter “YE,” status code after providing or citing appropriate “levels,” and referencing sufficient supporting documentation demonstrating that these “levels” are not exceeded.

☐ If yes (for any media) - continue after identifying key contaminants in each “contaminated” medium, citing appropriate “levels” (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

☐ If unknown (for any media) - skip to #6 and enter “IN” status code.

Rationale and Reference(s):

This property is 0.67 acres in size and is served by public sewer and water (see attached Figures 1 and 2). The nearest surface water body is a limestone quarry pond approximately 100 feet south west of the site, and this water was not tested. On October

12, 1985 Ray Worcester, Rockport Fire Chief, reported a fire at this facility to MEDEP. Two MEDEP responders arrived at the scene after the fire was out and performed some preliminary air monitoring. MEDEP responders did not see any sign of contaminants in the runoff. The “surface water” samples that were taken after the 1985 fire were collected on site from where a berm had been created to contain fire water. The laboratory results dated 10/28/1985 were reportedly ND for VOCs, as stated in the MEDEP spill report, however, the lab reports have been unable to be located. After the fire a 275 gallon fuel oil AST remained intact along with 55 gallon drums. The fire, electrical in nature, was just after the facility had formally closed out their interim license. This closure (terminating the interim license and no longer storing hazardous waste on site for more than 90 days) consisted of, among other things, removal of all hazardous waste containers to a licensed hazardous waste disposal facility, decontamination of the bermed and concrete hazardous waste storage area, and certification by a registered Maine professional engineer that the facility had been closed in compliance with the closure plan approved by the Board of Environmental Protection. When the facility was shut down in 2007 it went through another closure with MEDEP as is described in detail in the MEDEP files.

In May 2005 five soil borings were advanced on the property by GeoInsight(see Figure 2 for boring locations). Bedrock was encountered 4-6 feet below ground surface. Field screening, for the five borings, and laboratory analysis of soil samples from three borings, did not identify VOCs above background levels (1ppm) or laboratory quantification limits (see attached laboratory soil analytical report). Groundwater was not encountered.

References:

GeoInsight, Inc., June 28, 2005. *Phase I Environmental Site Assessment and Subsurface Investigation, Knox Semiconductor.*

Ransom Environmental Consultants, Inc., October 31, 2007. *Certification of Site Closure, Aeroflex/MicroMetrics.*

Also Maine DEP file materials available in Augusta and filed by original site name of Knox Semiconductor.

Footnotes:

¹ “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there complete pathways between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)								
“Contaminated” Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ³	
Groundwater	—	—	—	—				—
Air (indoors)	—	—	—					
Soil (surface, e.g., <2 ft)	—	—	—	—	—	—		—
Surface Water	—	—			—	—		—
Sediment	—	—			—	—		—
Soil (subsurface e.g., >2 ft)				—				—
Air (outdoors)	—	—	—	—	—			

Instructions for Summary Exposure Pathway Evaluation Table

1. Strike-out specific Media including Human Receptors’ spaces for Media which are not “contaminated”) as identified in #2 above.
2. enter “yes” or “no” for potential “completeness” under each “Contaminated” Media-- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces (“___”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- ___ If no (pathways are not complete for any contaminated mediareceptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- ___ If yes (pathways are complete for any “Contaminated” Media- Human Receptor combination) - continue after providing supporting explanation.
- ___ If unknown (for any “Contaminated” Media- Human Receptor combination)- skip to #6 and enter “IN” status code

Rationale and Reference(s): _____

Footnotes:
³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"⁴ (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

_____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway)- skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway)- continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway)- skip to #6 and enter "IN" status code

Rationale and Reference(s): _____

Footnotes:

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5 Can the “significant” exposures (identified in #4) be shown to be within acceptable limits?

- _____ If yes (all “significant” exposures have been shown to be within acceptable limits)- continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).
- _____ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.
- _____ If unknown (for any potentially “unacceptable” exposure)- continue and enter “IN” status code

Rationale and Reference(s): _____

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

☒ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the MicroMetrics facility, EPA ID #MED071730220, located at 12 Industrial Park Rd, Rockport under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

☐ NO - "Current Human Exposures" are NOT "Under Control."

☐ IN - More information is needed to make a determination.

Completed by (signature) Heather Jackson Date 9/30/09
(print) Heather Jackson
(title) Environmental Specialist

Supervisor (signature) Stacy A. Ladner Date 9/30/09
(print) Stacy A. Ladner
(title) Env. Manager
(EPA Region or State) Maine

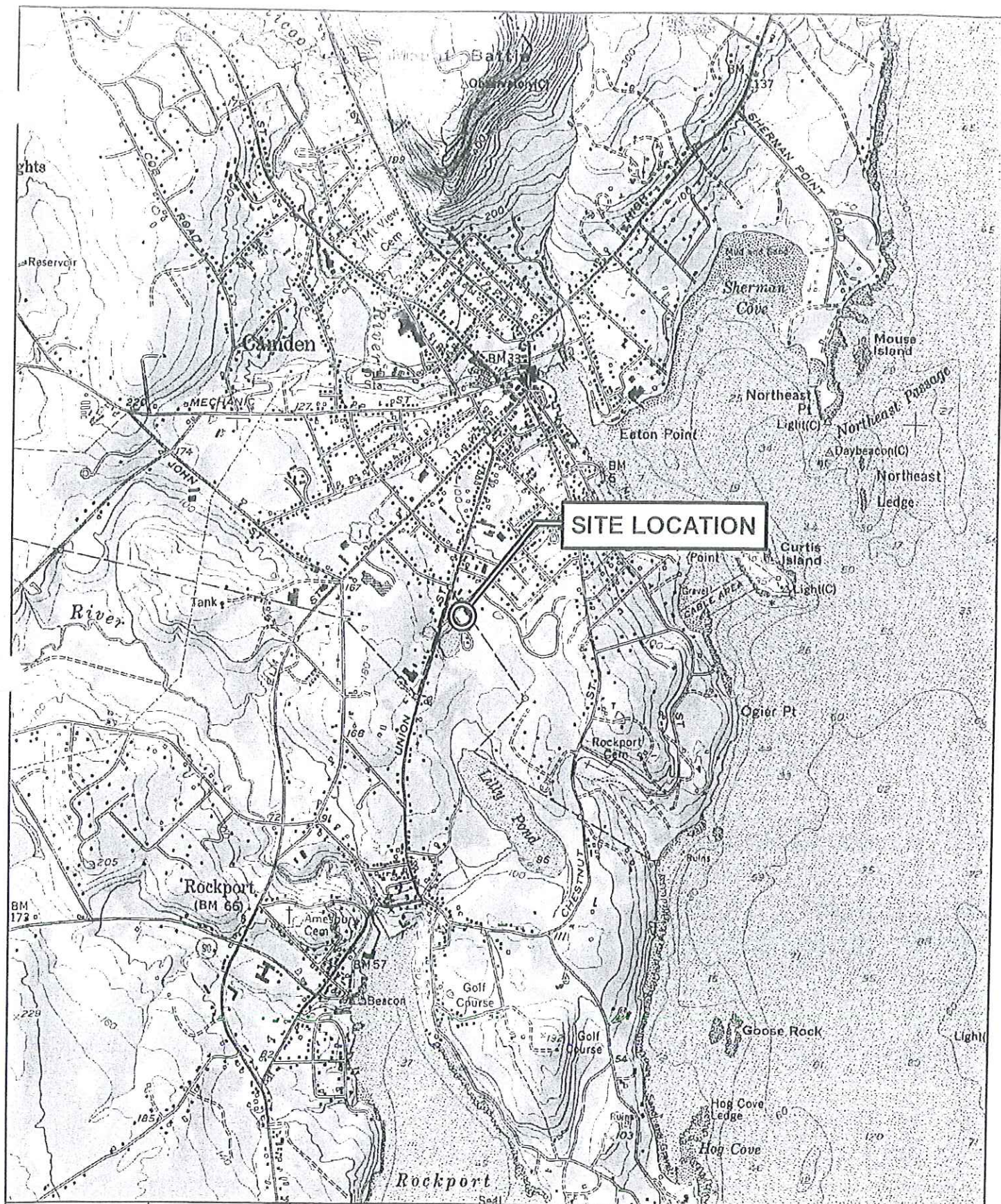
Locations where References may be found:

Maine DEP, Augusta office

Contact telephone and e-mail numbers

(name) Heather Jackson
(phone #) (207) 287-7880
(e-mail) heather.p.jackson@maine.gov

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.



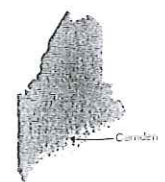
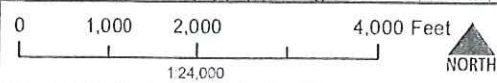
PROJECT: 076055 DATE: 10/19/2007

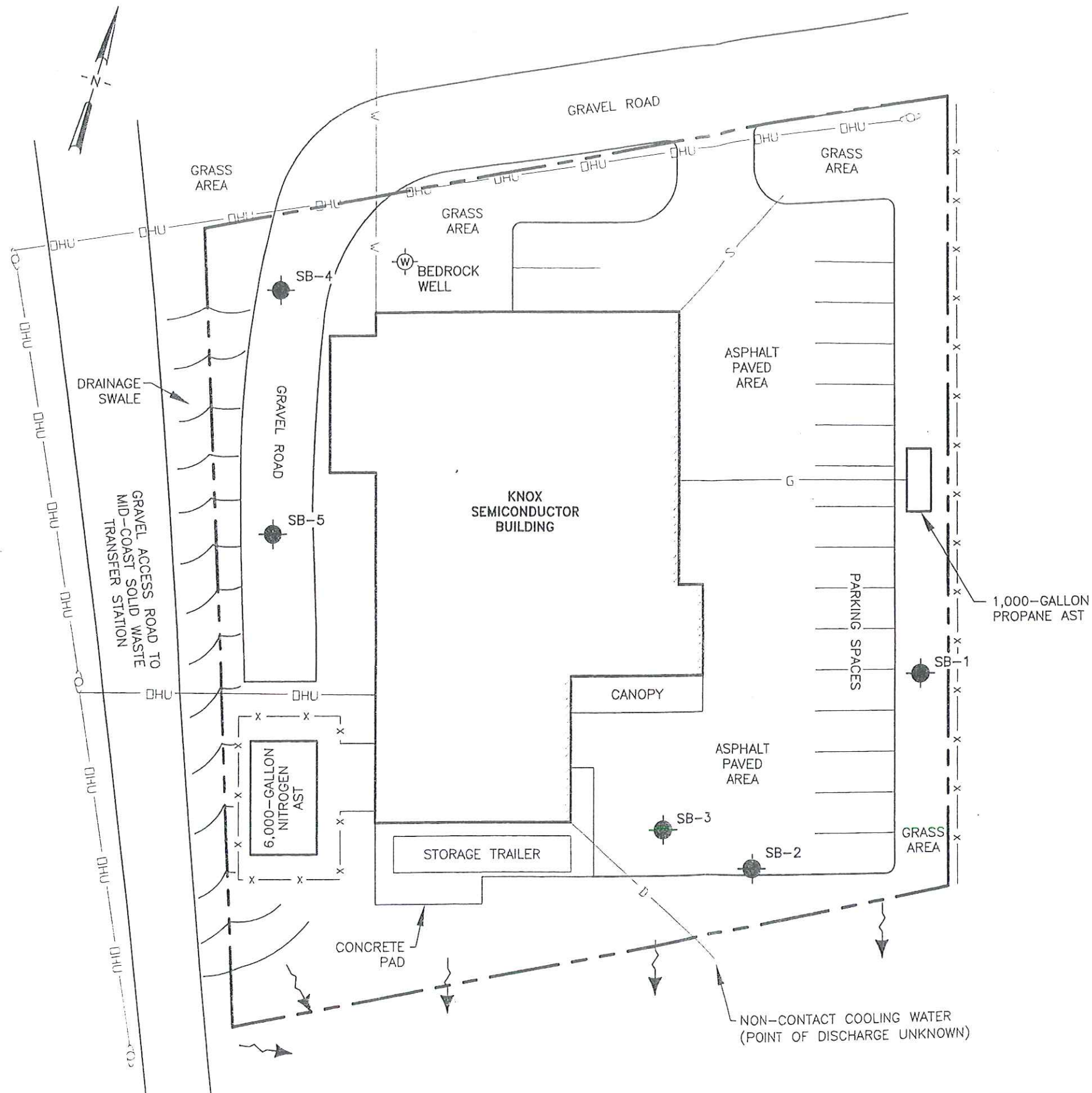
RANSOM
Environmental
Consultants, Inc.

Figure 1 Site Location Map

Prepared For:
Aeroflex / Micrometrics
54 Grenier Field Road
Londonderry, New Hampshire

Site Address:
Micrometrics, Inc.
12 Industrial Park Road
Rockport, Maine





LEGEND



BEDROCK WELL



SB-1

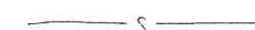
SOIL BORING



APPROXIMATE LOCATION OF
PROPERTY BOUNDARY



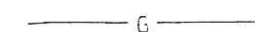
APPROXIMATE LOCATION OF
CHAIN-LINK FENCE



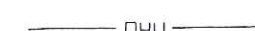
APPROXIMATE LOCATION OF
MUNICIPAL SEWER LINE



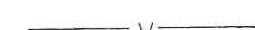
APPROXIMATE LOCATION OF
DRAIN LINE



APPROXIMATE LOCATION OF
GAS LINE



APPROXIMATE LOCATION OF
OVERHEAD UTILITY LINES



APPROXIMATE LOCATION OF
WATER LINE



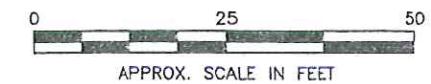
UTILITY POLE



SLOPE

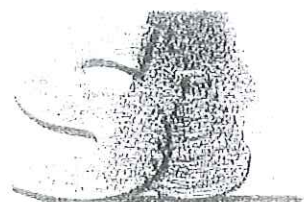
NOTES:

1. SITE PLAN DEVELOPED FROM DRAWING ENTITLED "PLAN OF LAND BELONGING TO JOHN R. WILLIAMS, LOCATED IN ROCKPORT, MAINE", DATED MAY 1980, ON RECORD AT THE TOWN OF ROCKPORT BUILDING AND DEVELOPEMENT DEPARTMENT.



		CLIENT: MICROMETRICS, INC.		
		PROJECT: 12 INDUSTRIAL PARK ROAD ROCKPORT, MAINE		
TITLE: SITE PLAN				
DESIGNED: PTS	DRAWN: DLL	CHECKED: PDF	APPROVED: BDK	FIGURE NO.: 2
SCALE: 1" = 25'	DATE: 6/16/05	FILE NO.: 4445d001	PROJECT NO.: 4445-000	

Report Date:
01-Jun-05 14:50



SPECTRUM ANALYTICAL, INC.

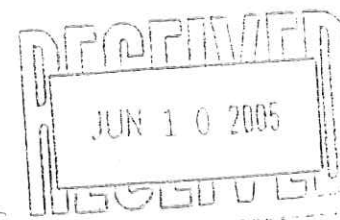
Featuring
HAMBAL TECHNOLOGY

Laboratory Report

GeoInsight, Inc.
25 Sundial Avenue, Suite 515 West
Manchester, NH 03103
Attn: Peter Frank

Project: Rockport, ME
Project #: 4445

- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report



Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA28712-01	SB-1 (0-4)	Soil	25-May-05 08:00	27-May-05 09:11
SA28712-02	SB-3 (0-4)	Soil	25-May-05 09:45	27-May-05 09:11
SA28712-03	SB-4 (0-4)	Soil	25-May-05 10:00	27-May-05 09:11

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 13 pages of analytical data plus Chain of Custody document(s).
This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hambal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

CASE NARRATIVE:

The data set for work order SA28712 complies with internal QC criteria for the methods performed. The samples were received @ 4.0 degrees Celsius. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

The samples were analyzed and reported on a wet-weight basis per client request. Field preserved soil and sediment samples must always have an unpreserved sample aliquot collected and submitted in order to determine the moisture content of the sample.

Please refer to "Notes and Definitions" for all sample/analyte qualifiers. Qualifiers will note any exceedance levels and issues relating to sample analysis/matrix.

ENVIRONMENTAL ANALYSES

Identification	Client Project #	Matrix	Collection Date/Time	Received
4) -01	4445	Soil	25-May-05 08:00	27-May-05

Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Organic Compounds									
VOC Extraction	Field extracted	N/A	1	VOC	01-Jun-05	01-Jun-05	5060056	JAK	
Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)						VOC10	
Acetone	BRL	448 µg/kg wet	50	SW846 8260B	28-May-05	28-May-05	5051941	tim	
Acrylonitrile	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Benzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Bromobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Bromochloromethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Bromodichloromethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Bromoform	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Bromomethane	BRL	44.8 µg/kg wet	50	"	"	"	"	"	
2-Butanone (MEK)	BRL	224 µg/kg wet	50	"	"	"	"	"	
n-Butylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
sec-Butylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
tert-Butylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Carbon disulfide	BRL	112 µg/kg wet	50	"	"	"	"	"	
Carbon tetrachloride	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Chlorobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Chloroethane	BRL	44.8 µg/kg wet	50	"	"	"	"	"	
Chloroform	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Chloromethane	BRL	44.8 µg/kg wet	50	"	"	"	"	"	
2-Chlorotoluene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
4-Chlorotoluene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	44.8 µg/kg wet	50	"	"	"	"	"	
Dibromochloromethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Dibromomethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	44.8 µg/kg wet	50	"	"	"	"	"	
1,1-Dichloroethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,2-Dichloroethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,1-Dichloroethene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,2-Dichloropropane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,3-Dichloropropane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
2,2-Dichloropropane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1,1-Dichloropropene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Ethylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
Hexachlorobutadiene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
2-Hexanone (MBK)	BRL	224 µg/kg wet	50	"	"	"	"	"	
Isopropylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
4-Isopropyltoluene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date Time	Received
SB-1 (0-4)	4445	Soil	25-May-05 08:00	27-May-05
SA '12-01				

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
---------	------------	--------	------------	----------	-------------	----------	----------	-------	---------	------

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260B Prepared by method SW846 5030 Soil (high level) VOC10

1634-04-4	Methyl tert-butyl ether	BRL	22.4 µg/kg wet	50	SW846 8260B	28-May-05	28-May-05	5051941	tim	
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
75-09-2	Methylene chloride	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
91-20-3	Naphthalene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
100-42-5	Styrene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
79-34-5	1,1,1,2-Tetrachloroethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
108-88-3	Toluene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
95-00-0	1,2,4-Trimethylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
108-90-7	1,3,5-Trimethylbenzene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	22.4 µg/kg wet	50	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	44.8 µg/kg wet	50	"	"	"	"	"	
95-47-6	o-Xylene	BRL	22.4 µg/kg wet	50	"	"	"	"	"	

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	106	70-130 %	"	"	"	"	"	"	
2037-26-5	Toluene-d8	92.8	70-130 %	"	"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	106	70-130 %	"	"	"	"	"	"	
1868-53-7	Dibromofluoromethane	105	70-130 %	"	"	"	"	"	"	

dentification

4)

2-02

Client Project #

4445

Matrix

Soil

Collection Date/Time

25-May-05 09:45

Received

27-May-05

Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Organic Compounds									
VOC Extraction	Field extracted	N/A	1	VOC	01-Jun-05	01-Jun-05	5060056	JAK	
Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)						VOC10	
Acetone	BRL	410 µg/kg wet	50	SW846 8260B	28-May-05	28-May-05	5051941	um	
Acrylonitrile	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Benzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Bromobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Bromochloromethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Bromodichloromethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Bromoform	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Bromomethane	BRL	41.0 µg/kg wet	50	"	"	"	"	"	
2-Butanone (MEK)	BRL	205 µg/kg wet	50	"	"	"	"	"	
n-Butylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
sec-Butylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
tert-Butylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Carbon disulfide	BRL	102 µg/kg wet	50	"	"	"	"	"	
Carbon tetrachloride	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Chlorobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Chloroethane	BRL	41.0 µg/kg wet	50	"	"	"	"	"	
Chloroform	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Chloromethane	BRL	41.0 µg/kg wet	50	"	"	"	"	"	
2-Chlorotoluene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
4-Chlorotoluene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	41.0 µg/kg wet	50	"	"	"	"	"	
Dibromochloromethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Dibromomethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	41.0 µg/kg wet	50	"	"	"	"	"	
1,1-Dichloroethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,2-Dichloroethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,1-Dichloroethene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,2-Dichloropropane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,3-Dichloropropane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
2,2-Dichloropropane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1,1-Dichloropropene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Ethylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
Hexachlorobutadiene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
2-Hexanone (MBK)	BRL	205 µg/kg wet	50	"	"	"	"	"	
Isopropylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
4-Isopropyltoluene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SB-3 (0-4)	4445	Soil	25-May-05 09:45	27-May-05
SA28712-02				

Class No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
-----------	------------	--------	------------	----------	-------------	----------	----------	-------	---------	------

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)						VOC10		
1634-04-4	Methyl tert-butyl ether	BRL	20.5 µg/kg wet	50	SW846 8260B	28-May-05	28-May-05	5051941	tim	
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	205 µg/kg wet	50	"	"	"	"	"	
75-09-2	Methylene chloride	BRL	205 µg/kg wet	50	"	"	"	"	"	
91-20-3	Naphthalene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
100-42-5	Styrene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	30.7 µg/kg wet	50	"	"	"	"	"	
108-88-3	Toluene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
108-90-8	1,3,5-Trimethylbenzene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	20.5 µg/kg wet	50	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	41.0 µg/kg wet	50	"	"	"	"	"	
95-47-6	o-Xylene	BRL	20.5 µg/kg wet	50	"	"	"	"	"	

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	107	70-130 %	"	"	"	"	"	"	
2037-26-5	Toluene-d8	92.4	70-130 %	"	"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	104	70-130 %	"	"	"	"	"	"	
1868-53-7	Dibromofluoromethane	105	70-130 %	"	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SB-4 (0-4)	4445	Soil	25-May-05 10:00	27-May-05
SA28712-05				

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
VOC Extraction		Field extracted	N/A	1	VOC	01-Jun-05	01-Jun-05	5060050	JAK	
Volatile Organic Compounds by SW846 8260B			Prepared by method SW846 5030 Soil (high level)					VOC10		
67-64-1	Acetone	BRL	430 µg/kg wet	50	SW846 8260B	28-May-05	28-May-05	5051941	tim	
107-13-1	Acrylonitrile	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
71-43-2	Benzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
75-25-2	Bromoform	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
74-83-9	Bromomethane	BRL	43.0 µg/kg wet	50	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	215 µg/kg wet	50	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	108 µg/kg wet	50	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
75-00-3	Chloroethane	BRL	43.0 µg/kg wet	50	"	"	"	"	"	
67-66-3	Chloroform	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
74-87-3	Chloromethane	BRL	43.0 µg/kg wet	50	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	43.0 µg/kg wet	50	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	43.0 µg/kg wet	50	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	215 µg/kg wet	50	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	21.5 µg/kg wet	50	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SB-4 (0-4)	4445	Soil	25-May-05 10:00	27-May-05
28712-03				

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analysis Flag
---------	------------	--------	------------	----------	-------------	----------	----------	-------	---------------

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)					VOC10		
1634-04-4	Methyl tert-butyl ether	BRL	21.5 µg/kg wet	50	SW846 8260B	28-May-05	28-May-05	5051841	un
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	21.5 µg/kg wet	50	"	"	"	"	"
75-09-2	Methylene chloride	BRL	21.5 µg/kg wet	50	"	"	"	"	"
91-20-5	Naphthalene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
103-65-1	n-Propylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
100-42-5	Styrene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
630-20-6	1,1,1,2-Tetrachloroethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"
127-18-4	Tetrachloroethene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
108-88-3	Toluene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	21.5 µg/kg wet	50	"	"	"	"	"
79-01-6	Trichloroethene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	21.5 µg/kg wet	50	"	"	"	"	"
96-18-4	1,2,3-Trichloropropane	BRL	21.5 µg/kg wet	50	"	"	"	"	"
63-6	1,2,4-Trimethylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
-67-8	1,3,5-Trimethylbenzene	BRL	21.5 µg/kg wet	50	"	"	"	"	"
75-01-4	Vinyl chloride	BRL	21.5 µg/kg wet	50	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL	43.0 µg/kg wet	50	"	"	"	"	"
95-47-6	o-Xylene	BRL	21.5 µg/kg wet	50	"	"	"	"	"

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	107	70-130 %	"	"	"	"	"	"
2037-26-5	Toluene-d8	93.2	70-130 %	"	"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	108	70-130 %	"	"	"	"	"	"
1868-53-7	Dibromofluoromethane	106	70-130 %	"	"	"	"	"	"

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Flag
Batch 5051941 - SW846 5030 Soil (high level)								
Blank (5051941-BLK1)			Prepared & Analyzed: 28-May-05					
Acetone	BRL	20.0 µg/kg wet						
Acrylonitrile	BRL	1.0 µg/kg wet						
Benzene	BRL	1.0 µg/kg wet						
Bromobenzene	BRL	1.0 µg/kg wet						
Bromochloromethane	BRL	1.0 µg/kg wet						
Bromodichloromethane	BRL	1.0 µg/kg wet						
Bromoform	BRL	1.0 µg/kg wet						
Bromomethane	BRL	2.0 µg/kg wet						
2-Butanone (MEK)	BRL	10.0 µg/kg wet						
n-Butylbenzene	BRL	1.0 µg/kg wet						
sec-Butylbenzene	BRL	1.0 µg/kg wet						
tert-Butylbenzene	BRL	1.0 µg/kg wet						
Carbon disulfide	BRL	5.0 µg/kg wet						
Carbon tetrachloride	BRL	1.0 µg/kg wet						
Chlorobenzene	BRL	1.0 µg/kg wet						
Chloroethane	BRL	2.0 µg/kg wet						
Chloroform	BRL	1.0 µg/kg wet						
Chloromethane	BRL	2.0 µg/kg wet						
2-Chlorotoluene	BRL	1.0 µg/kg wet						
4-Chlorotoluene	BRL	1.0 µg/kg wet						
1,2-Dibromo-3-chloropropane	BRL	2.0 µg/kg wet						
Dibromochloromethane	BRL	1.0 µg/kg wet						
1,2-Dibromoethane (EDB)	BRL	1.0 µg/kg wet						
Dibromomethane	BRL	1.0 µg/kg wet						
1,2-Dichlorobenzene	BRL	1.0 µg/kg wet						
1,3-Dichlorobenzene	BRL	1.0 µg/kg wet						
1,4-Dichlorobenzene	BRL	1.0 µg/kg wet						
Dichlorodifluoromethane (Freon12)	BRL	2.0 µg/kg wet						
1,1-Dichloroethane	BRL	1.0 µg/kg wet						
1,2-Dichloroethane	BRL	1.0 µg/kg wet						
1,1-Dichloroethene	BRL	1.0 µg/kg wet						
cis-1,2-Dichloroethene	BRL	1.0 µg/kg wet						
trans-1,2-Dichloroethene	BRL	1.0 µg/kg wet						
1,2-Dichloropropane	BRL	1.0 µg/kg wet						
1,3-Dichloropropane	BRL	1.0 µg/kg wet						
2,2-Dichloropropane	BRL	1.0 µg/kg wet						
1,1-Dichloropropene	BRL	1.0 µg/kg wet						
cis-1,3-Dichloropropene	BRL	1.0 µg/kg wet						
trans-1,3-Dichloropropene	BRL	1.0 µg/kg wet						
Ethylbenzene	BRL	1.0 µg/kg wet						
Hexachlorobutadiene	BRL	1.0 µg/kg wet						
2-Hexanone (MBK)	BRL	10.0 µg/kg wet						
Isopropylbenzene	BRL	1.0 µg/kg wet						
4-Isopropyltoluene	BRL	1.0 µg/kg wet						
Methyl tert-butyl ether	BRL	1.0 µg/kg wet						
4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/kg wet						
Methylene chloride	BRL	10.0 µg/kg wet						
Naphthalene	BRL	1.0 µg/kg wet						
n-Propylbenzene	BRL	1.0 µg/kg wet						
Styrene	BRL	1.0 µg/kg wet						
1,1,1,2-Tetrachloroethane	BRL	1.0 µg/kg wet						
1,1,2,2-Tetrachloroethane	BRL	1.0 µg/kg wet						
Tetrachloroethene	BRL	1.0 µg/kg wet						
Toluene	BRL	1.0 µg/kg wet						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5051941 - SW846 5030 Soil (high level)									
Blank (5051941-BLK1)									
Prepared & Analyzed: 28-May-05									
1,2,3-Trichlorobenzene	BRL	1.0 µg/kg wet							
1,2,4-Trichlorobenzene	BRL	1.0 µg/kg wet							
1,1,1-Trichloroethane	BRL	1.0 µg/kg wet							
1,1,2-Trichloroethane	BRL	1.0 µg/kg wet							
Trichloroethene	BRL	1.0 µg/kg wet							
Trichlorofluoromethane (Freon 11)	BRL	1.0 µg/kg wet							
1,2,3-Trichloropropane	BRL	1.0 µg/kg wet							
1,2,4-Trimethylbenzene	BRL	1.0 µg/kg wet							
1,3,5-Trimethylbenzene	BRL	1.0 µg/kg wet							
Vinyl chloride	BRL	2.0 µg/kg wet							
m,p-Xylene	BRL	1.0 µg/kg wet							
o-Xylene	BRL	1.0 µg/kg wet							
Surrogate: 4-Bromofluorobenzene	53.7	µg/kg wet	50.0		107	70-130			
Surrogate: Toluene-d8	46.9	µg/kg wet	50.0		93.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	46.7	µg/kg wet	50.0		93.4	70-130			
Surrogate: Dibromofluoromethane	49.7	µg/kg wet	50.0		99.4	70-130			
Prepared & Analyzed: 28-May-05									
LCS (5051941-BS1)									
Acetone	14.2	µg/kg wet	20.0		71.0	19.4-217			
Acrylonitrile	16.3	µg/kg wet	20.0		81.5	70-130			
Benzene	19.5	µg/kg wet	20.0		97.5	70-130			
nbenzene	20.6	µg/kg wet	20.0		103	70-130			
Bromochloromethane	20.0	µg/kg wet	20.0		100	70-130			
Bromodichloromethane	20.0	µg/kg wet	20.0		100	70-130			
Bromoform	21.4	µg/kg wet	20.0		107	70-130			
Bromomethane	18.2	µg/kg wet	20.0		91.0	48.6-171			
2-Butanone (MEK)	8.6	µg/kg wet	20.0		43.0	16.5-153			
n-Butylbenzene	20.4	µg/kg wet	20.0		102	70-130			
sec-Butylbenzene	20.6	µg/kg wet	20.0		103	70-130			
tert-Butylbenzene	20.9	µg/kg wet	20.0		104	70-130			
Carbon disulfide	19.0	µg/kg wet	20.0		95.0	70-130			
Carbon tetrachloride	20.4	µg/kg wet	20.0		102	70-130			
Chlorobenzene	19.7	µg/kg wet	20.0		98.5	70-130			
Chloroethane	18.6	µg/kg wet	20.0		93.0	68.8-140			
Chloroform	19.5	µg/kg wet	20.0		97.5	70-130			
Chloromethane	21.8	µg/kg wet	20.0		109	70-130			
2-Chlorotoluene	19.8	µg/kg wet	20.0		99.0	70-130			
4-Chlorotoluene	19.7	µg/kg wet	20.0		98.5	70-130			
1,2-Dibromo-3-chloropropane	18.2	µg/kg wet	20.0		91.0	70-130			
Dibromochloromethane	15.2	µg/kg wet	20.0		76.0	53.9-173			
1,2-Dibromoethane (EDB)	17.1	µg/kg wet	20.0		85.5	70-130			
Dibromomethane	20.3	µg/kg wet	20.0		102	70-130			
1,2-Dichlorobenzene	20.8	µg/kg wet	20.0		104	70-130			
1,3-Dichlorobenzene	20.5	µg/kg wet	20.0		102	70-130			
1,4-Dichlorobenzene	20.3	µg/kg wet	20.0		102	70-130			
Dichlorodifluoromethane (Freon12)	23.9	µg/kg wet	20.0		120	59.6-150			
1,1-Dichloroethane	19.3	µg/kg wet	20.0		96.5	70-130			
1,2-Dichloroethane	18.9	µg/kg wet	20.0		94.5	70-130			
1,1-Dichloroethene	19.2	µg/kg wet	20.0		96.0	70-130			
cis-1,2-Dichloroethene	20.1	µg/kg wet	20.0		100	70-130			
trans-1,2-Dichloroethene	19.0	µg/kg wet	20.0		95.0	70-130			
1,2-Dichloropropane	20.0	µg/kg wet	20.0		100	70-130			
1,3-Dichloropropane	19.3	µg/kg wet	20.0		96.5	70-130			
2,2-Dichloropropane	19.2	µg/kg wet	20.0		96.0	70-130			
1,1-Dichloropropene	19.4	µg/kg wet	20.0		97.0	70-130			

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5051941 - SW846 5030 Soil (high level)									
LCS (5051941-BS1)			Prepared & Analyzed: 28-May-05						
cis-1,3-Dichloropropene	19.7	µg/kg wet	20.0		98.5	70-130			QC-1
trans-1,3-Dichloropropene	19.2	µg/kg wet	20.0		96.0	70-130			
Ethylbenzene	19.7	µg/kg wet	20.0		98.5	70-130			
Hexachlorobutadiene	21.4	µg/kg wet	20.0		107	67.9-157			
2-Hexanone (MBK)	11.8	µg/kg wet	20.0		59.0	70-130			
Isopropylbenzene	19.3	µg/kg wet	20.0		96.5	70-130			
4-Isopropyltoluene	21.5	µg/kg wet	20.0		108	70-130			
Methyl tert-butyl ether	19.4	µg/kg wet	20.0		97.0	70-130			
4-Methyl-2-pentanone (MIBK)	12.2	µg/kg wet	20.0		61.0	43.9-154			
Methylene chloride	19.3	µg/kg wet	20.0		96.5	70-130			
Naphthalene	20.7	µg/kg wet	20.0		104	70-130			
n-Propylbenzene	20.2	µg/kg wet	20.0		101	70-130			
Styrene	20.8	µg/kg wet	20.0		104	70-130			
1,1,1,2-Tetrachloroethane	20.0	µg/kg wet	20.0		100	70-130			
1,1,2,2-Tetrachloroethane	25.8	µg/kg wet	20.0		129	70-130			
Tetrachloroethene	19.0	µg/kg wet	20.0		95.0	70-130			
Toluene	19.4	µg/kg wet	20.0		97.0	70-130			
1,2,3-Trichlorobenzene	22.2	µg/kg wet	20.0		111	70-130			
1,2,4-Trichlorobenzene	21.6	µg/kg wet	20.0		108	70-130			
1,1,1-Trichloroethane	19.4	µg/kg wet	20.0		97.0	70-130			
1,1,2-Trichloroethane	20.0	µg/kg wet	20.0		100	70-130			
Trichloroethene	15.9	µg/kg wet	20.0		79.5	70-130			
Trichlorofluoromethane (Freon 11)	19.9	µg/kg wet	20.0		99.5	70-138			
1,2,3-Trichloropropane	18.9	µg/kg wet	20.0		94.5	70-130			
1,2,4-Trimethylbenzene	20.9	µg/kg wet	20.0		104	70-130			
1,3,5-Trimethylbenzene	20.6	µg/kg wet	20.0		103	70-130			
Vinyl chloride	21.6	µg/kg wet	20.0		108	70-130			
m,p-Xylene	40.4	µg/kg wet	40.0		101	70-130			
o-Xylene	23.9	µg/kg wet	20.0		120	70-130			
Surrogate: 4-Bromofluorobenzene	52.5	µg/kg wet	50.0		105	70-130			
Surrogate: Toluene-d8	48.1	µg/kg wet	50.0		96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	48.8	µg/kg wet	50.0		97.6	70-130			
Surrogate: Dibromofluoromethane	51.5	µg/kg wet	50.0		103	70-130			
LCS Dup (5051941-BSD1)			Prepared & Analyzed: 28-May-05						
Acetone	22.8	µg/kg wet	20.0		114	19.4-217	46.5	50	QR-05
Acrylonitrile	20.0	µg/kg wet	20.0		100	70-130	20.4	25	
Benzene	19.9	µg/kg wet	20.0		99.5	70-130	2.03	25	
Bromobenzene	21.2	µg/kg wet	20.0		106	70-130	2.87	25	
Bromochloromethane	20.0	µg/kg wet	20.0		100	70-130	0.00	25	
Bromodichloromethane	19.7	µg/kg wet	20.0		98.5	70-130	1.51	25	
Bromoform	22.8	µg/kg wet	20.0		114	70-130	6.33	25	
Bromomethane	18.7	µg/kg wet	20.0		93.5	48.6-171	2.71	50	
2-Butanone (MEK)	16.4	µg/kg wet	20.0		82.0	16.5-153	62.4	50	
n-Butylbenzene	21.3	µg/kg wet	20.0		106	70-130	3.85	25	
sec-Butylbenzene	21.5	µg/kg wet	20.0		108	70-130	4.74	25	
tert-Butylbenzene	21.7	µg/kg wet	20.0		108	70-130	3.77	25	
Carbon disulfide	19.8	µg/kg wet	20.0		99.0	70-130	4.12	25	
Carbon tetrachloride	21.6	µg/kg wet	20.0		108	70-130	5.71	25	
Chlorobenzene	20.6	µg/kg wet	20.0		103	70-130	4.47	25	
Chloroethane	19.6	µg/kg wet	20.0		98.0	68.8-140	5.24	50	
Chloroform	20.1	µg/kg wet	20.0		100	70-130	2.53	25	
Chloromethane	21.5	µg/kg wet	20.0		108	70-130	0.922	25	
2-Chlorotoluene	20.6	µg/kg wet	20.0		103	70-130	3.96	25	
4-Chlorotoluene	20.2	µg/kg wet	20.0		101	70-130	2.51	25	

Volatile Organic Compounds - Quality Control

analytes)	Result	*RDL Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5051941 - SW846 5030 Soil (high level)									
LCS Dup (5051941-BSM1)			Prepared & Analyzed: 28-May-05						
1,2-Dibromo-3-chloropropane	18.7	µg/kg wet	20.0		93.5	70-130	2.71	25	
Dibromochloromethane	16.0	µg/kg wet	20.0		80.0	53.9-175	1.15	50	
1,2-Dibromoethane (EDB)	17.5	µg/kg wet	20.0		87.5	70-130	2.31	25	
Dibromomethane	20.4	µg/kg wet	20.0		102	70-130	0.00	25	
1,2-Dichlorobenzene	21.9	µg/kg wet	20.0		110	70-130	5.61	25	
1,3-Dichlorobenzene	21.1	µg/kg wet	20.0		106	70-130	3.85	25	
1,4-Dichlorobenzene	21.0	µg/kg wet	20.0		105	70-130	2.90	25	
Dichlorodifluoromethane (Freon12)	26.0	µg/kg wet	20.0		130	59.6-150	8.00	50	
1,1-Dichloroethane	20.3	µg/kg wet	20.0		102	70-130	5.54	25	
1,2-Dichloroethane	19.3	µg/kg wet	20.0		96.5	70-130	2.09	25	
1,1-Dichloroethene	19.8	µg/kg wet	20.0		99.0	70-130	3.08	25	
cis-1,2-Dichloroethene	20.7	µg/kg wet	20.0		104	70-130	3.92	25	
trans-1,2-Dichloroethene	19.7	µg/kg wet	20.0		98.5	70-130	3.62	25	
1,2-Dichloropropane	20.3	µg/kg wet	20.0		102	70-130	1.98	25	
1,3-Dichloropropane	20.0	µg/kg wet	20.0		100	70-130	3.56	25	
2,2-Dichloropropane	19.7	µg/kg wet	20.0		98.5	70-130	2.57	25	
1,1-Dichloropropene	20.2	µg/kg wet	20.0		101	70-130	4.04	25	
cis-1,3-Dichloropropene	20.4	µg/kg wet	20.0		102	70-130	3.49	25	
trans-1,3-Dichloropropene	19.9	µg/kg wet	20.0		99.5	70-130	3.58	25	
Ethylbenzene	20.6	µg/kg wet	20.0		103	70-130	4.47	25	
Hexachlorobutadiene	23.2	µg/kg wet	20.0		116	67.9-157	8.07	50	
2-Hexanone (MBK)	15.4	µg/kg wet	20.0		77.0	70-130	26.5	25	QR-05
o-propylbenzene	20.3	µg/kg wet	20.0		102	70-130	5.54	25	
4-Isopropyltoluene	22.2	µg/kg wet	20.0		111	70-130	2.74	25	
Methyl tert-butyl ether	20.0	µg/kg wet	20.0		100	70-130	3.05	25	
4-Methyl-2-pentanone (MIBK)	13.9	µg/kg wet	20.0		69.5	43.9-154	13.0	50	
Methylene chloride	20.1	µg/kg wet	20.0		100	70-130	3.56	25	
Naphthalene	21.3	µg/kg wet	20.0		106	70-130	1.90	25	
n-Propylbenzene	20.8	µg/kg wet	20.0		104	70-130	2.93	25	
Styrene	21.7	µg/kg wet	20.0		108	70-130	3.77	25	
1,1,1,2-Tetrachloroethane	21.2	µg/kg wet	20.0		106	70-130	5.83	25	
1,1,2,2-Tetrachloroethane	25.9	µg/kg wet	20.0		130	70-130	0.772	25	
Tetrachloroethene	20.2	µg/kg wet	20.0		101	70-130	6.12	25	
Toluene	19.9	µg/kg wet	20.0		99.5	70-130	2.54	25	
1,2,3-Trichlorobenzene	22.7	µg/kg wet	20.0		114	70-130	2.67	25	
1,2,4-Trichlorobenzene	22.4	µg/kg wet	20.0		112	70-130	3.64	25	
1,1,1-Trichloroethane	20.6	µg/kg wet	20.0		103	70-130	6.00	25	
1,1,2-Trichloroethane	20.2	µg/kg wet	20.0		101	70-130	0.995	25	
Trichloroethene	16.7	µg/kg wet	20.0		83.5	70-130	4.91	25	
Trichlorofluoromethane (Freon 11)	21.2	µg/kg wet	20.0		106	70-138	6.33	50	
1,2,3-Trichloropropane	19.3	µg/kg wet	20.0		96.5	70-130	2.09	25	
1,2,4-Trimethylbenzene	21.6	µg/kg wet	20.0		108	70-130	3.77	25	
1,3,5-Trimethylbenzene	21.5	µg/kg wet	20.0		108	70-130	4.74	25	
Vinyl chloride	22.2	µg/kg wet	20.0		111	70-130	2.74	25	
m,p-Xylene	42.5	µg/kg wet	40.0		106	70-130	4.83	25	
o-Xylene	25.2	µg/kg wet	20.0		126	70-130	4.88	25	
Surrogate: 4-Bromofluorobenzene	52.3	µg/kg wet	50.0		105	70-130			
Surrogate: Toluene-d8	47.5	µg/kg wet	50.0		95.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	48.5	µg/kg wet	50.0		97.0	70-130			
urrogate: Dibromofluoromethane	50.8	µg/kg wet	50.0		102	70-130			
Matrix Spike (5051941-MS1)			Source: SA28579-02		Prepared & Analyzed: 28-May-05				
Benzene	18.3	µg/kg dry	20.0	BRL	91.5	70-130			
Chlorobenzene	19.7	µg/kg dry	20.0	BRL	98.5	70-130			
1,1-Dichloroethene	17.1	µg/kg dry	20.0	BRL	85.5	70-130			

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5051941 - SW846 5030 Soil (high level)									
Matrix Spike (5051941-MS1)	Source: SA28579-02		Prepared & Analyzed: 28-May-05						
Toluene	18.6	µg/kg dry	20.0	BRL	93.0	70-130			
Trichloroethene	15.9	µg/kg dry	20.0	0.773	75.6	70-130			
Surrogate: 4-Bromofluorobenzene	51.3	µg/kg dry	50.0		103	70-130			
Surrogate: Toluene-d8	47.3	µg/kg dry	50.0		94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	52.3	µg/kg dry	50.0		105	70-130			
Surrogate: Dibromofluoromethane	53.3	µg/kg dry	50.0		107	70-130			
Matrix Spike Dup (5051941-MSD1)	Source: SA28579-02		Prepared & Analyzed: 28-May-05						
Benzene	19.4	µg/kg dry	20.0	BRL	97.0	70-130	5.84	30	
Chlorobenzene	20.9	µg/kg dry	20.0	BRL	104	70-130	5.43	30	
1,1-Dichloroethene	18.4	µg/kg dry	20.0	BRL	92.0	70-130	7.32	30	
Toluene	19.4	µg/kg dry	20.0	BRL	97.0	70-130	4.21	30	
Trichloroethene	16.7	µg/kg dry	20.0	0.773	79.6	70-130	5.15	30	
Surrogate: 4-Bromofluorobenzene	53.1	µg/kg dry	50.0		106	70-130			
Surrogate: Toluene-d8	47.2	µg/kg dry	50.0		94.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	53.2	µg/kg dry	50.0		106	70-130			
Surrogate: Dibromofluoromethane	54.6	µg/kg dry	50.0		109	70-130			

Notes and Definitions

- 1 Analyte out of acceptance range.
- QR-05 RPD out of acceptance range.
- vext2 Field extracted
- VOC10 The VOC field preserved soil sample is not within the 1:1 weight to volume ratio as recommended by SW846 methods 5030 and 5035 but may be within the 1:1 volume to volume ratio.
- BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- NR Not Reported
- RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

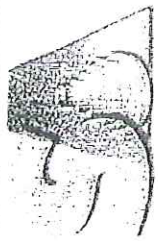
Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown



SPECTRUM ANALYTICAL, INC.

LABORATORY

CHAIN OF CUSTODY RECORD

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 5/27/05
All TATs subject to laboratory approval
Min. 24-hour notification needed for rushes
Samples disposed of after 60 days unless otherwise instructed.

Report To: GeoSinsight
25 Sundial Ave Suite 515
Manchester, NH 03103

Page 1 of 1

Invoice To: GeoSinsight
25 Sundial Ave Suite 515
Manchester, NH 03103

Project No.: 4445
Site Name: Rockport
Location: Rockport, ME State: ME
Sampler(s): Patrick S. Brown

Project Mgr.: Peter Frank

P.O. No.: _____ RQN: _____

1=Na₂SO₄ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9= _____ 10= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
N1= _____ N2= _____ N3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix
18-112-01	SB-1(0-4)	5/25/05	800	G	SO
02	SB-3(0-4)	5/25/05	945	G	SO
03	SB-4(0-4)	5/25/05	1000	G	SO

Preservative

of VOA Vials

of Amber Glass

of Clear Glass

of Plastic

Analyses:

QA Reporting Notes:
(check if needed)

State specific reporting standards
If applicable, please refer to:

- ☐ Provide MTT/AM Report
Were all field QC requirements met
as per MADD T/AM Section 3.0?
☐ Yes ☐ No
(Response required for CMAA report)

Run wet
basic
See attached

☐ Fax results when available to ()

E-mail to PDfrank@GeoSinsight.com

EDD Format

Condition upon receipt: ☒ Cool ☐ Ambient ☐ °C

Relinquished by:

Patrick S. Brown
Field X

Received by:

Cooler Freden
CK Muller

Date:

5/25/05
5/27/05

Time:

1100
911