

Phase (check one)	Type (Check one)
<input checked="" type="checkbox"/> Initial Site Investigation	<input type="checkbox"/> Work Scope
<input type="checkbox"/> Corrective Action	<input checked="" type="checkbox"/> Technical Report
<input type="checkbox"/> Feasibility Investigation	<input type="checkbox"/> PCF
<input type="checkbox"/> Corrective Action Plan	<input type="checkbox"/> Reimbursement Request
<input type="checkbox"/> Corrective Action	<input type="checkbox"/> General Correspondence
<input type="checkbox"/> Summary Report	
<input type="checkbox"/> Operations and Monitoring Report	

INITIAL SITE INVESTIGATION REPORT
FORMER FUIKS RESIDENCE
300 MAIN STREET
WARDSBORO, VT 05355
VT DEC SITE #1997-2283

Prepared for:

WARREN WILLIAMS
P.O. Box 1589
WEST DOVER, VT 05356

AUG 26 10 12 AM '04
 ENVIRONMENTAL COMPLIANCE SERVICES, INC.

FILE No. 40068/04-201919
DOCUMENT: ISIREP0704
JULY 12, 2004

PREPARED BY:
ENVIRONMENTAL COMPLIANCE SERVICES, INC.
30 HARRIS PLACE; BRATTLEBORO, VT 05301
FAX: 802-257-1603

802-257-1195

www.ecsconsult.com



30 HARRIS PLACE
BRATTLEBORO, VT 05301
802-257-1195
FAX: 802-257-1603
WWW.ECSCONSULT.COM

July 10, 2004
Job No: 40068/04-201919
Document: Cover.lt

Mr. Chuck Schwer, Section Chief
VT DEC WMD SMS
103 South Main Street/West Office
Waterbury, VT 05671-0404

RE: Initial Site Investigation Report
Former Fuiks Residence
300 Main Street
Wardsboro, VT 05355
VT DEC Site #1997-2283

Dear Mr. Schwer:

On behalf of Warren Williams, Environmental Compliance Services, Inc., (ECS) of Brattleboro, Vermont has completed a Initial Site Investigation at the above referenced site, as requested by the Vermont Department of Environmental Conservation (VT DEC) in a letters dated January 22, 1998 and follow-up email correspondences on April 1, 2004, through April 5, 2004.

If you have any questions or require further information, please contact me at 802-257-1195.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

A handwritten signature in cursive script that reads 'David C. Balk'.

David C. Balk, P.G., R.S.
Senior Project Manager

AB/DCB

Enclosures

cc: Warren Williams, Site Owner

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 SCOPE OF WORK	2
3.0 SITE DESCRIPTION	3
3.1 SITE AND VICINITY	3
4.0 FIELD INVESTIGATIONS AND REMEDIAL ACTIONS	4
4.1 SOIL EXCAVATION AND DISPOSAL	4
4.2 SOIL BORING INSTALLATION	4
4.3 INDOOR AIR MONITORING	4
4.4 DRINKING WATER AND SURFACE WATER SAMPLING	4
5.0 EVALUATION OF SOIL AND DRINKING WATER QUALITY.....	5
5.1 VOC ANALYSES	5
6.0 SENSITIVE RECEPTOR SURVEY.....	7
7.0 CONCLUSIONS.....	8
8.0 RECOMMENDATIONS	9

FIGURES:

Figure 1	Site Locus Map
Figure 2	Site Sketch

APPENDICES:

Appendix A	Laboratory Reports of Soil Analyses and Chain of Custody Statements
Appendix B	Photo of Premark for Drilling and Gravel/Cobbles Encountered in Soil Borings
Appendix C	Soil boring logs

1.0 INTRODUCTION

An Initial Site Investigation (ISI) of the Former Fuiks Residence located at 300 Main Street in Wardsboro, Vermont (herein referred to as the Site) was conducted by Environmental Compliance Services, Inc., (ECS) of Brattleboro, Vermont from October 1997 through May 2004. The subject property is located in a residential setting and the land is owned by Alison and Warren Williams. A Site location Map is presented as Figure 1.

On October 7, 1997 ECS performed the closure assessment during the removal of a 550 gallon #2 fuel oil underground storage tank (UST) from the site. The Vermont Department of Environmental Conservation (VT DEC) assigned a Sites Management Section (SMS) #1997-2283 to the site and directed ECS to perform necessary clean up actions and that subsurface investigations related to the UST release.

2.0 SCOPE OF WORK

ECS performed the following tasks:

- ECS personnel field screened soil samples for volatile organic compounds (VOCs) by photoionization detector (PID). The samples were collected during the removal of approximately 12 cubic yards of contaminated soil which was excavated, transported, and disposed of at MTS, Inc. in Chichester, New Hampshire;
- installation of soil borings (SB-1, -2, -3);
- sampling of the on-site drinking water supply well and sampling of surface water from the stream downgradient of the site for analysis of VOCs by EPA Method 8021b Vermont VOC Scan;
- identification of potential sensitive receptors;
- completion of this ISI report.

3.0 SITE DESCRIPTION

3.1 SITE AND VICINITY

The Site is located at 300 Main Street in Wardsboro, Vermont and the land is currently owned by Alison and Warren Williams (Figure 1, Site Locus Map). Properties abutting the Site are all residential. The closest surface water body is an unnamed brook leading to Wardsboro Brook, which abuts the Site to the south.

The Site vicinity is mainly residential. The Site and abutting properties are serviced by private wells. The unnamed brook is located approximately 30 feet to the south of the Site. A drinking water well is located approximately 100 feet upgradient of the Site. Topography at the site is relatively flat, sloping in a southerly direction. The average elevation of the Site is approximately 1004 feet above mean sea level (National Geodetic Vertical Datum) (Figure 1).

On October 7, 1997 a 550-gallon #2 fuel oil UST was removed from the site. The UST removal was undertaken prior to the sale of the property to Alison and Warren Williams.

4.0 FIELD INVESTIGATIONS AND REMEDIAL ACTIONS

Initial site activities performed by ECS included soil excavation, the installation of soil borings, air monitoring, and drinking water and surface water sampling and analysis.

4.1 SOIL EXCAVATION AND DISPOSAL

On October 7, 1997 approximately 12 cubic yards of contaminated soils were excavated by Browns Country Services of East Dover, Vermont (under the direction of ECS) and polyencapsulated on-site. A composite soil sample was collected on October 9, 1997 from the polyencapsulated soil pile for disposal criteria analysis (see laboratory data in Appendix A). On January 10, 1998 the polyencapsulated soil was shipped by Brown's Country Services to MTS for disposal.

4.2 SOIL BORING INSTALLATION

On May 6, 2004 soil borings were installed (SB-1, -2, -3) to assess the potential for the presence of a release of heating oil to groundwater from the UST (see photographs in Appendix B). The soil boring locations were chosen based upon tank grave and assumed groundwater flow direction (see soil boring logs in Appendix C). The locations of the soil borings are presented in the Site Sketch, Figure 2.

4.3 INDOOR AIR MONITORING

At the time of the tank removal, the ambient airspace in the basement of the house at the Site was screened for VOCs with a PID. No VOCs were detected.

4.4 DRINKING WATER AND SURFACE WATER SAMPLING

On February 5, 1998 a sample from the on-site drinking water supply well was obtained and analyzed (with a trip blank and duplicate sample) at Spectrum Analytical for VOCs by EPA Method 8260 with drinking water detection limits. No contaminants tested for were detected (see laboratory data in Appendix A).

5.0 EVALUATION OF SOIL AND DRINKING WATER QUALITY

5.1 VOC ANALYSES

Results of field screening of soil samples collected during the tank removal on October 9, 1997 indicated an exceedance of VT DEC VOC headspace analysis for Fuel Oil #2. PID readings exceeding 10 parts per million by volume (ppmv), with the highest level at 35 ppmv, were detected.

Results of drinking water samples collected on February 5, 1998 indicate no exceedance of VT DEC Primary Groundwater Quality Standards (PGQS).

Results of analysis of soil samples collected during advancement of soil borings on May 6, 2004 indicate no exceedance of EPA Region III soil standards (see laboratory data in Appendix A).

6.0 SENSITIVE RECEPTOR SURVEY

The potential sensitive receptors of most immediate concern are nearby surface water, any proximal drinking water sources and basements of adjacent buildings. A drinking water well is located approximately 100 feet upgradient of the Site. Indoor air in the basement of the building was screened for VOCs with a PID, and none were detected above the MDL of 0.1 ppmv during UST removal on October 7, 1997.

The closest off-site residential properties abut the Site upgradient of the contaminate plume, therefore air quality was not tested at those residences. No water supply wells are located at any properties that abut the Site.

The unnamed brook is the nearest potential environmental receptor and is located 30 feet from the Site. Observations made by ECS personnel indicate that no petroleum sheen or odors in the unnamed brook were evident in the vicinity of the Site. Therefore, there is no immediate evidence that the release is impacting the unnamed brook.

7.0 CONCLUSIONS

ECS presents the following conclusions based on the information obtained at the Site to date:

- The subject property, located at 300 Main Street, Wardsboro, Vermont, is the Site of the Former Fuiks Residence where a 550-gallon UST was removed on October 7, 1997.
- The source of the petroleum impacts (#2 fuel oil UST) and contaminated soil immediately surrounding the tank have been removed.
- After discussions with the VT DEC, ECS personnel conducted the following activities: soil excavation, installation of soil borings, drinking water and surface water sampling, identification of sensitive receptors, and completion of ISI report.
- The Site and abutting properties are serviced by private wells.
- Groundwater flow direction at the site was determined to be to the south-southeast to the unnamed brook leading towards Wardsboro Brook.
- Results of laboratory analysis of soil samples collected did not indicate levels above the minimum detection limit for the individual compounds.
- Therefore, the remaining residual petroleum (if any) appear to be highly localized in the former source area and there is no evidence of exposure to any sensitive receptors.

8.0 RECOMMENDATIONS

The following recommendations were developed based on results of this investigation:

- Based upon previous soil sample results and soil boring advancement in May 2004, no residual contamination has been detected, therefore ECS recommends the VT DEC issue a Sites Management Activities Completion (SMAC) designation for this site.

FIGURE 1
SITE LOCUS MAP



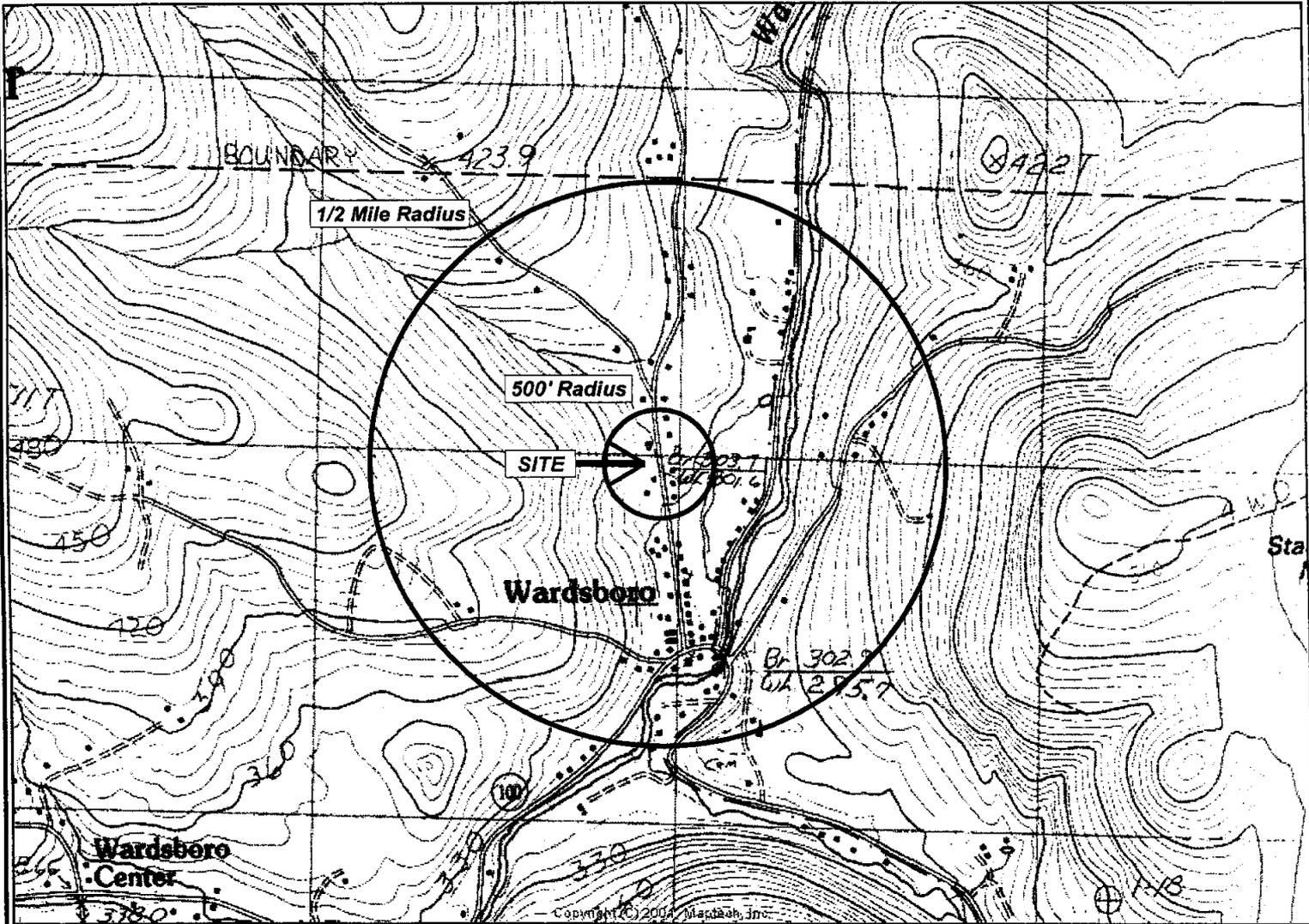
Environmental Compliance Services, Inc.
 30 Harris Place, Brattleboro, VT 05301
 Phone (802)-257-1195 Fax (802)-257-1603
 www.ecsconsult.com

SITE LOCUS

Figure: 1

Former Fuiks Property
300 Main Street
Wardsboro, VT

Job Number: 04-201919



1 1/2 0 1 Mile

1 inch = 1500 feet

Contour Interval: 6 Meters

North

Base Map: U.S. Geological Survey; Quadrangle Location: Jamaica, VT

UTM Coordinates: 18 0679975 East / 47 68194 North



Map Edited:

Map Revised:

Generated By: ALB

FIGURE 2
SITE SKETCH

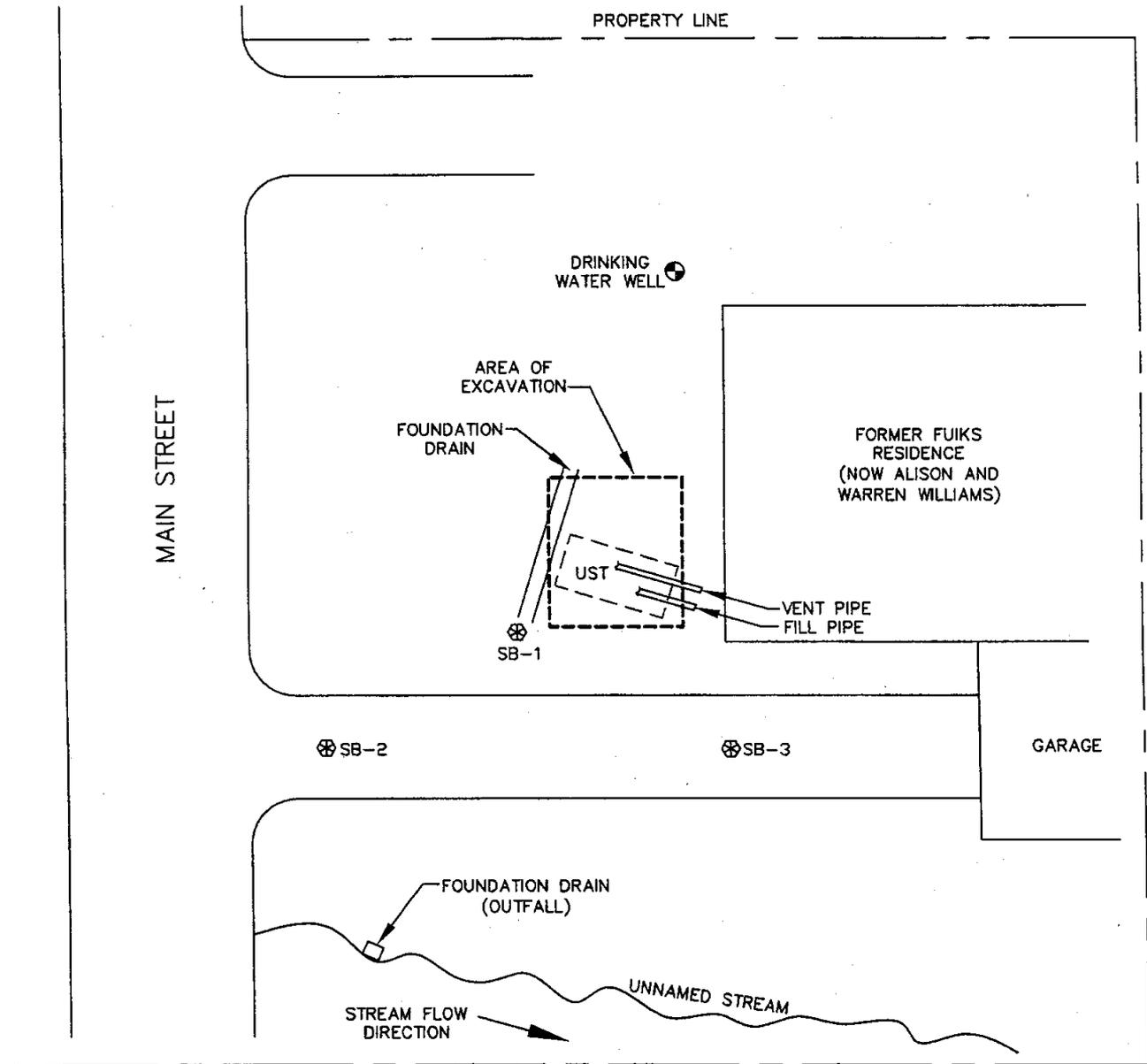


FIGURE 2
SITE SKETCH
(NOT TO SCALE)

FORMER FUIKS RESIDENCE
300 MAIN STREET
WARDSBORO, VERMONT

APPENDIX A

**LABORATORY REPORTS OF SOIL ANALYSES AND CHAIN OF CUSTODY
STATEMENTS**



SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 253896
New York ID #11393
Florida HRS87448

*ECS, Inc.
157 Old Guilford Road, #6
Brattleboro, VT 05301*

October 17, 1997

Attn: David Balk

Client Project No.: **40068**

Location: **Fulks Residence-Wardsboro, VT**

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AA88029	FR-1	EPA Method 8260 Total RCRA8 Metals Flash Point TPH by GC

Authorized by

Hanibal Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: FR-1
Lab ID No.: AA88029

Location: **Fulks Residence-Wardsboro, VT**
Client Job No.: **40068**

Matrix: Soil
Collected: 10/09/97 by ECS-VT
Received on 10/15/97 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 3 Glass Soil Jars
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total Hydrocarbons by GC

Modified EPA Method 8100

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
Total Hydrocarbons (GC)	570		10/16/97	10/17/97	ATP
Fingerprint based quantification:					
Gasoline	Not detected	40	10/16/97	10/17/97	ATP
Fuel Oil #2	570	40	10/16/97	10/17/97	ATP
Fuel Oil #4	Not detected	40	10/16/97	10/17/97	ATP
Fuel Oil #6	Not detected	80	10/16/97	10/17/97	ATP
Motor Oil	Not detected	80	10/16/97	10/17/97	ATP
Ligroin	Not detected	40	10/16/97	10/17/97	ATP
Aviation Fuel	Not detected	40	10/16/97	10/17/97	ATP
Other Oil	Not detected	80	10/16/97	10/17/97	ATP
Unidentified	Not detected		10/16/97	10/17/97	ATP
% Solids	81.1	0.1	10/16/97	10/16/97	LR

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from petroleum products. Possible match categories are as follows;

Gasoline - includes regular, unleaded, premium, etc.

Fuel Oil #2 - includes home heating oil, #2 fuel oil and diesel.

Fuel Oil #4 - Includes #4 Fuel Oil.

Fuel Oil #6 - includes #6 oil and bunker "C" oil.

Motor Oil - includes virgin and waste automobile.

Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha.

Aviation Fuels - includes Kerosene, Jet A and JP-4.

Other Oil - includes lubricating and cutting oil and silicon oil.

Factors such as microbial degradation, weathering and solubility generally prevent specific identification within a petroleum category. A finding of "unidentified" means that the sample fingerprint was characteristic of a petroleum product, but could not be matched to a fingerprint in the library.

After fingerprint identification, the amount present in the sample is quantified using a calibration curve prepared from a petroleum product of the same category as the identified petroleum. Unidentified petroleum is quantified using a petroleum calibration that approximates the distribution of compounds in the sample.

A * in the results column indicates the petroleum calibration used to quantify unidentified samples.

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **FR-1**
Lab ID No.: **AA88029**

Location: **Fulks Residence-Wardsboro, VT**
Client Job No.: **40068**

Matrix: Soil
Collected: 10/09/97 by ECS-VT
Received on 10/15/97 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Organics

EPA Method 8260

Parameter for AA88029	Result (ug/Kg)	MDL	Extracted	Analyzed	Analyst
Benzene	Not detected	5.0	10/16/97	10/17/97	DG
Bromobenzene	Not detected	5.0	10/16/97	10/17/97	DG
Bromochloromethane	Not detected	5.0	10/16/97	10/17/97	DG
Bromodichloromethane	Not detected	5.0	10/16/97	10/17/97	DG
Bromoform	Not detected	5.0	10/16/97	10/17/97	DG
n-Butylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
sec-Butylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
tert-Butylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
Carbon tetrachloride	Not detected	5.0	10/16/97	10/17/97	DG
Chlorobenzene	Not detected	5.0	10/16/97	10/17/97	DG
Chloroform	Not detected	5.0	10/16/97	10/17/97	DG
2-Chlorotoluene	Not detected	5.0	10/16/97	10/17/97	DG
4-Chlorotoluene	Not detected	5.0	10/16/97	10/17/97	DG
1,2-Dibromo-3-chloropropane	Not detected	5.0	10/16/97	10/17/97	DG
Dibromochloromethane	Not detected	5.0	10/16/97	10/17/97	DG
1,2-Dibromoethane (EDB)	Not detected	5.0	10/16/97	10/17/97	DG
Dibromomethane	Not detected	5.0	10/16/97	10/17/97	DG
1,2-Dichlorobenzene	Not detected	5.0	10/16/97	10/17/97	DG
1,3-Dichlorobenzene	Not detected	5.0	10/16/97	10/17/97	DG
1,4-Dichlorobenzene	Not detected	5.0	10/16/97	10/17/97	DG
1,1-Dichloroethane	Not detected	5.0	10/16/97	10/17/97	DG
1,2-Dichloroethane	Not detected	5.0	10/16/97	10/17/97	DG
1,1-Dichloroethene	Not detected	5.0	10/16/97	10/17/97	DG
cis-1,2-Dichloroethene	Not detected	5.0	10/16/97	10/17/97	DG
trans-1,2-Dichloroethene	Not detected	5.0	10/16/97	10/17/97	DG
1,2-Dichloropropane	Not detected	5.0	10/16/97	10/17/97	DG
1,3-Dichloropropane	Not detected	5.0	10/16/97	10/17/97	DG
2,2-Dichloropropane	Not detected	5.0	10/16/97	10/17/97	DG

Parameter for AA88029	Result (ug/Kg)	MDL	Extracted	Analyzed	Analyst
1,1-Dichloropropene	Not detected	5.0	10/16/97	10/17/97	DG
cis-1,3-Dichloropropene	Not detected	5.0	10/16/97	10/17/97	DG
trans-1,3-Dichloropropene	Not detected	5.0	10/16/97	10/17/97	DG
Ethylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
Hexachlorobutadiene	Not detected	5.0	10/16/97	10/17/97	DG
Isopropylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
4-Isopropyltoluene	Not detected	5.0	10/16/97	10/17/97	DG
Methylene chloride	Not detected	12.5	10/16/97	10/17/97	DG
Naphthalene	Not detected	5.0	10/16/97	10/17/97	DG
n-Propylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
Styrene	Not detected	5.0	10/16/97	10/17/97	DG
1,1,1,2-Tetrachloroethane	Not detected	5.0	10/16/97	10/17/97	DG
1,1,2,2-Tetrachloroethane	Not detected	5.0	10/16/97	10/17/97	DG
Tetrachloroethene	Not detected	5.0	10/16/97	10/17/97	DG
Toluene	Not detected	5.0	10/16/97	10/17/97	DG
1,2,3-Trichlorobenzene	Not detected	5.0	10/16/97	10/17/97	DG
1,2,4-Trichlorobenzene	Not detected	5.0	10/16/97	10/17/97	DG
1,1,1-Trichloroethane	Not detected	5.0	10/16/97	10/17/97	DG
1,1,2-Trichloroethane	Not detected	5.0	10/16/97	10/17/97	DG
Trichloroethene	Not detected	5.0	10/16/97	10/17/97	DG
Trichlorofluoromethane	Not detected	5.0	10/16/97	10/17/97	DG
1,2,3-Trichloropropane	Not detected	5.0	10/16/97	10/17/97	DG
1,2,4-Trimethylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
1,3,5-Trimethylbenzene	Not detected	5.0	10/16/97	10/17/97	DG
m,p-Xylenes	Not detected	10.0	10/16/97	10/17/97	DG
o-Xylene	Not detected	5.0	10/16/97	10/17/97	DG
Methyl-t-butyl ether	Not detected	5.0	10/16/97	10/17/97	DG
BFB Surrogate Recovery (%)	91		10/16/97	10/17/97	DG
p-DFB Surrogate Recovery (%)	90		10/16/97	10/17/97	DG
CLB-d5 Surrogate Recovery (%)	101		10/16/97	10/17/97	DG
% Solids	81.1	0.1	10/16/97	10/16/97	LR

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: FR-1
Lab ID No: AA88029

Location: Fulks Residence-Wardsboro, VT
Client Job No: 40068

Matrix: Soil
Collected: 10/09/97 by ECS-VT
Received on 10/15/97 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 3 Glass Soil Jars
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total RCRA8 Metals

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
Arsenic	Not detected	1.100	10/16/97	10/17/97	CR
Barium	48.4	1.100	10/16/97	10/17/97	CR
Cadmium	Not detected	1.100	10/16/97	10/17/97	CR
Chromium	9.57	1.100	10/16/97	10/17/97	CR
Lead	64.7	0.550	10/16/97	10/17/97	CR
Mercury	Not detected	0.237	10/16/97	10/17/97	CR
Selenium	Not detected	0.550	10/16/97	10/17/97	CR
Silver	Not detected	1.100	10/16/97	10/17/97	CR

SPECTRUM ANALYTICAL, INC.
Laboratory Report (Subcontracted Analysis)

Client ID: **FR-1**
Lab ID No.: **AA88029**

Location: **Fulks Residence-Wardsboro, VT**
Client Job No.: **40068**

Matrix: Soil
Collected: 10/09/97 by ECS-VT
Received on 10/15/97 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 3 Glass Soil Jars
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Flash Point

SW846 1010

Parameter	Result (degree F)	Analyzed	Analyst
Flash Point	>200	10/16/97	CR

Spectrum Analytical, Inc.

Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected, Not Det, ND or nd	=	<i>The compound was not detected at a concentration equal to or above the established method detection limit.</i>
NC	=	<i>Not Calculated</i>
MCL	=	<i>EPA Maximum Contamination Level</i>
VOA	=	<i>Volatile Organic Analysis</i>
BFB	=	<i>4-Bromofluorobenzene (an EPA 624 Surrogate)</i>
p-DFB	=	<i>1,4-Difluorobenzene (an EPA 624 Surrogate)</i>
CLB-d5	=	<i>Chlorobenzene-d5 (an EPA 624 Surrogate)</i>
BCP	=	<i>2-Bromo-1-chloropropane (an EPA 601 Surrogate)</i>
TFT	=	<i>a, a, a-Trifluorotoluene (an EPA 602 Surrogate)</i>
Decachlorobiphenyl	=	<i>(an EPA 608/8080 Surrogate)</i>

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (% RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2}) * 100\%}{\text{ave. value}}$$



RECEIVED FEB 17 1998

SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 253896
New York ID #11393
Florida HRS87448

*ECS, Inc.
157 Old Guilford Road, #6
Brattleboro, VT 05301*

February 10, 1998

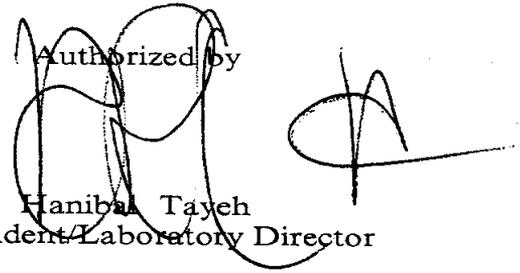
Attn: Sue Pittenger

Client Project No.: **40068**

Location: **Fuiks Res. - Wardsboro, VT**

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AA96778	F-DW	EPA Method 8260
AA96779	F-DUP	EPA Method 8260
AA96780	F-TRIP	EPA Method 8260

Authorized by



Hanibal Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **F-DW**
Lab ID No: **AA96778**

Location: **Fuiks Res. - Wardsboro, VT**
Client Job No.: **40068**

Matrix: **Water**
Sampled on 02/05/98 by ECS-VT
Received on 02/06/98 by MBR
QC and Data Review by

Preservative: Refrigeration, HCl
Container : 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Organics EPA Method 8260

Parameter for AA96778	Result (in ug/L)	MDL	Analyzed	Analyst
Benzene	Not detected	0.5	02/09/98	DG
Bromobenzene	Not detected	0.5	02/09/98	DG
Bromochloromethane	Not detected	0.5	02/09/98	DG
Bromodichloromethane	Not detected	0.5	02/09/98	DG
Bromoform	Not detected	0.5	02/09/98	DG
Bromomethane	Not detected	0.5	02/09/98	DG
n-Butylbenzene	Not detected	0.5	02/09/98	DG
sec-Butylbenzene	Not detected	0.5	02/09/98	DG
tert-Butylbenzene	Not detected	0.5	02/09/98	DG
Carbon tetrachloride	Not detected	0.5	02/09/98	DG
Chlorobenzene	Not detected	0.5	02/09/98	DG
Chloroethane	Not detected	2.5	02/09/98	DG
Chloroform	Not detected	0.5	02/09/98	DG
Chloromethane	Not detected	2.5	02/09/98	DG
2-Chlorotoluene	Not detected	0.5	02/09/98	DG
4-Chlorotoluene	Not detected	0.5	02/09/98	DG
1,2-Dibromo-3-chloropropane	Not detected	0.5	02/09/98	DG
Dibromochloromethane	Not detected	0.5	02/09/98	DG
1,2-Dibromoethane (EDB)	Not detected	0.5	02/09/98	DG
Dibromomethane	Not detected	0.5	02/09/98	DG
1,2-Dichlorobenzene	Not detected	0.5	02/09/98	DG
1,3-Dichlorobenzene	Not detected	0.5	02/09/98	DG
1,4-Dichlorobenzene	Not detected	0.5	02/09/98	DG
Dichlorodifluoromethane	Not detected	0.5	02/09/98	DG
1,1-Dichloroethane	Not detected	0.5	02/09/98	DG
1,2-Dichloroethane	Not detected	0.5	02/09/98	DG
1,1-Dichloroethene	Not detected	0.5	02/09/98	DG
cis-1,2-Dichloroethene	Not detected	0.5	02/09/98	DG
trans-1,2-Dichloroethene	Not detected	0.5	02/09/98	DG
1,2-Dichloropropane	Not detected	0.5	02/09/98	DG
1,3-Dichloropropane	Not detected	0.5	02/09/98	DG
2,2-Dichloropropane	Not detected	0.5	02/09/98	DG
1,1-Dichloropropene	Not detected	0.5	02/09/98	DG
cis-1,3-Dichloropropene	Not detected	0.5	02/09/98	DG

Volatile Organics
EPA Method 8260

Parameter for AA96778	Result (in ug/L)	MDL	Analyzed	Analyst
trans-1,3-Dichloropropene	Not detected	0.5	02/09/98	DG
Ethylbenzene	Not detected	0.5	02/09/98	DG
Hexachlorobutadiene	Not detected	0.5	02/09/98	DG
Isopropylbenzene	Not detected	0.5	02/09/98	DG
4-Isopropyltoluene	Not detected	0.5	02/09/98	DG
Methylene chloride	Not detected	1.25	02/09/98	DG
Naphthalene	Not detected	0.5	02/09/98	DG
n-Propylbenzene	Not detected	0.5	02/09/98	DG
Styrene	Not detected	0.5	02/09/98	DG
1,1,1,2-Tetrachloroethane	Not detected	0.5	02/09/98	DG
1,1,2,2-Tetrachloroethane	Not detected	0.5	02/09/98	DG
Tetrachloroethene	Not detected	0.5	02/09/98	DG
Toluene	Not detected	0.5	02/09/98	DG
1,2,3-Trichlorobenzene	Not detected	0.5	02/09/98	DG
1,2,4-Trichlorobenzene	Not detected	0.5	02/09/98	DG
1,1,1-Trichloroethane	Not detected	0.5	02/09/98	DG
1,1,2-Trichloroethane	Not detected	0.5	02/09/98	DG
Trichloroethene	Not detected	0.5	02/09/98	DG
Trichlorofluoromethane	Not detected	0.5	02/09/98	DG
1,2,3-Trichloropropane	Not detected	0.5	02/09/98	DG
1,2,4-Trimethylbenzene	Not detected	0.5	02/09/98	DG
1,3,5-Trimethylbenzene	Not detected	0.5	02/09/98	DG
m,p-Xylenes	Not detected	1.0	02/09/98	DG
o-Xylene	Not detected	0.5	02/09/98	DG
Vinyl chloride	Not detected	0.5	02/09/98	DG
Methyl-t-butyl ether	Not detected	0.5	02/09/98	DG
Methyl Iodide	Not detected	0.5	02/09/98	DG
BFB Surrogate Recovery (%)	100		02/09/98	DG
p-DFB Surrogate Recovery (%)	102		02/09/98	DG
CLB-d5 Surrogate Recovery (%)	103		02/09/98	DG

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **F-DUP**
Lab ID No: **AA96779**

Location: **Fuiks Res. - Wardsboro, VT**
Client Job No.: **40068**

Matrix: **Water**
Sampled on 02/05/98 by ECS-VT
Received on 02/06/98 by MBR
QC and Data Review by

Preservative: Refrigeration, HCl
Container : 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Organics

EPA Method 8260

Parameter for AA96779	Result (in ug/L)	MDL	Analyzed	Analyst
Benzene	Not detected	0.5	02/09/98	DG
Bromobenzene	Not detected	0.5	02/09/98	DG
Bromochloromethane	Not detected	0.5	02/09/98	DG
Bromodichloromethane	Not detected	0.5	02/09/98	DG
Bromoform	Not detected	0.5	02/09/98	DG
Bromomethane	Not detected	0.5	02/09/98	DG
n-Butylbenzene	Not detected	0.5	02/09/98	DG
sec-Butylbenzene	Not detected	0.5	02/09/98	DG
tert-Butylbenzene	Not detected	0.5	02/09/98	DG
Carbon tetrachloride	Not detected	0.5	02/09/98	DG
Chlorobenzene	Not detected	0.5	02/09/98	DG
Chloroethane	Not detected	2.5	02/09/98	DG
Chloroform	Not detected	0.5	02/09/98	DG
Chloromethane	Not detected	2.5	02/09/98	DG
2-Chlorotoluene	Not detected	0.5	02/09/98	DG
4-Chlorotoluene	Not detected	0.5	02/09/98	DG
1,2-Dibromo-3-chloropropane	Not detected	0.5	02/09/98	DG
Dibromochloromethane	Not detected	0.5	02/09/98	DG
1,2-Dibromoethane (EDB)	Not detected	0.5	02/09/98	DG
Dibromomethane	Not detected	0.5	02/09/98	DG
1,2-Dichlorobenzene	Not detected	0.5	02/09/98	DG
1,3-Dichlorobenzene	Not detected	0.5	02/09/98	DG
1,4-Dichlorobenzene	Not detected	0.5	02/09/98	DG
Dichlorodifluoromethane	Not detected	0.5	02/09/98	DG
1,1-Dichloroethane	Not detected	0.5	02/09/98	DG
1,2-Dichloroethane	Not detected	0.5	02/09/98	DG
1,1-Dichloroethene	Not detected	0.5	02/09/98	DG
cis-1,2-Dichloroethene	Not detected	0.5	02/09/98	DG
trans-1,2-Dichloroethene	Not detected	0.5	02/09/98	DG
1,2-Dichloropropane	Not detected	0.5	02/09/98	DG
1,3-Dichloropropane	Not detected	0.5	02/09/98	DG
2,2-Dichloropropane	Not detected	0.5	02/09/98	DG
1,1-Dichloropropene	Not detected	0.5	02/09/98	DG
cis-1,3-Dichloropropene	Not detected	0.5	02/09/98	DG

Volatile Organics
EPA Method 8260

Parameter for AA96779	Result (in ug/L)	MDL	Analyzed	Analyst
trans-1,3-Dichloropropene	Not detected	0.5	02/09/98	DG
Ethylbenzene	Not detected	0.5	02/09/98	DG
Hexachlorobutadiene	Not detected	0.5	02/09/98	DG
Isopropylbenzene	Not detected	0.5	02/09/98	DG
4-Isopropyltoluene	Not detected	0.5	02/09/98	DG
Methylene chloride	Not detected	1.25	02/09/98	DG
Naphthalene	Not detected	0.5	02/09/98	DG
n-Propylbenzene	Not detected	0.5	02/09/98	DG
Styrene	Not detected	0.5	02/09/98	DG
1,1,1,2-Tetrachloroethane	Not detected	0.5	02/09/98	DG
1,1,2,2-Tetrachloroethane	Not detected	0.5	02/09/98	DG
Tetrachloroethene	Not detected	0.5	02/09/98	DG
Toluene	Not detected	0.5	02/09/98	DG
1,2,3-Trichlorobenzene	Not detected	0.5	02/09/98	DG
1,2,4-Trichlorobenzene	Not detected	0.5	02/09/98	DG
1,1,1-Trichloroethane	Not detected	0.5	02/09/98	DG
1,1,2-Trichloroethane	Not detected	0.5	02/09/98	DG
Trichloroethene	Not detected	0.5	02/09/98	DG
Trichlorofluoromethane	Not detected	0.5	02/09/98	DG
1,2,3-Trichloropropane	Not detected	0.5	02/09/98	DG
1,2,4-Trimethylbenzene	Not detected	0.5	02/09/98	DG
1,3,5-Trimethylbenzene	Not detected	0.5	02/09/98	DG
m,p-Xylenes	Not detected	1.0	02/09/98	DG
o-Xylene	Not detected	0.5	02/09/98	DG
Vinyl chloride	Not detected	0.5	02/09/98	DG
Methyl-t-butyl ether	Not detected	0.5	02/09/98	DG
Methyl Iodide	Not detected	0.5	02/09/98	DG
BFB Surrogate Recovery (%)	102		02/09/98	DG
p-DFB Surrogate Recovery (%)	101		02/09/98	DG
CLB-d5 Surrogate Recovery (%)	102		02/09/98	DG

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **F-TRIP**
Lab ID No: **AA96780**

Location: **Fuiks Res. - Wardsboro, VT**
Client Job No.: **40068**

Matrix: **Water**
Sampled on 02/05/98 by ECS-VT
Received on 02/06/98 by MBR
QC and Data Review by

Preservative: Refrigeration, HCl
Container : 1 VOA Vial
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Organics

EPA Method 8260

Parameter for AA96780	Result (in ug/L)	MDL	Analyzed	Analyst
Benzene	Not detected	0.5	02/09/98	DG
Bromobenzene	Not detected	0.5	02/09/98	DG
Bromochloromethane	Not detected	0.5	02/09/98	DG
Bromodichloromethane	Not detected	0.5	02/09/98	DG
Bromoform	Not detected	0.5	02/09/98	DG
Bromomethane	Not detected	0.5	02/09/98	DG
n-Butylbenzene	Not detected	0.5	02/09/98	DG
sec-Butylbenzene	Not detected	0.5	02/09/98	DG
tert-Butylbenzene	Not detected	0.5	02/09/98	DG
Carbon tetrachloride	Not detected	0.5	02/09/98	DG
Chlorobenzene	Not detected	0.5	02/09/98	DG
Chloroethane	Not detected	2.5	02/09/98	DG
Chloroform	Not detected	0.5	02/09/98	DG
Chloromethane	Not detected	2.5	02/09/98	DG
2-Chlorotoluene	Not detected	0.5	02/09/98	DG
4-Chlorotoluene	Not detected	0.5	02/09/98	DG
1,2-Dibromo-3-chloropropane	Not detected	0.5	02/09/98	DG
Dibromochloromethane	Not detected	0.5	02/09/98	DG
1,2-Dibromoethane (EDB)	Not detected	0.5	02/09/98	DG
Dibromomethane	Not detected	0.5	02/09/98	DG
1,2-Dichlorobenzene	Not detected	0.5	02/09/98	DG
1,3-Dichlorobenzene	Not detected	0.5	02/09/98	DG
1,4-Dichlorobenzene	Not detected	0.5	02/09/98	DG
Dichlorodifluoromethane	Not detected	0.5	02/09/98	DG
1,1-Dichloroethane	Not detected	0.5	02/09/98	DG
1,2-Dichloroethane	Not detected	0.5	02/09/98	DG
1,1-Dichloroethene	Not detected	0.5	02/09/98	DG
cis-1,2-Dichloroethene	Not detected	0.5	02/09/98	DG
trans-1,2-Dichloroethene	Not detected	0.5	02/09/98	DG
1,2-Dichloropropane	Not detected	0.5	02/09/98	DG
1,3-Dichloropropane	Not detected	0.5	02/09/98	DG
2,2-Dichloropropane	Not detected	0.5	02/09/98	DG
1,1-Dichloropropene	Not detected	0.5	02/09/98	DG
cis-1,3-Dichloropropene	Not detected	0.5	02/09/98	DG

Volatile Organics
EPA Method 8260

Parameter for AA96780	Result (in ug/L)	MDL	Analyzed	Analyst
trans-1,3-Dichloropropene	Not detected	0.5	02/09/98	DG
Ethylbenzene	Not detected	0.5	02/09/98	DG
Hexachlorobutadiene	Not detected	0.5	02/09/98	DG
Isopropylbenzene	Not detected	0.5	02/09/98	DG
4-Isopropyltoluene	Not detected	0.5	02/09/98	DG
Methylene chloride	Not detected	1.25	02/09/98	DG
Naphthalene	Not detected	0.5	02/09/98	DG
n-Propylbenzene	Not detected	0.5	02/09/98	DG
Styrene	Not detected	0.5	02/09/98	DG
1,1,1,2-Tetrachloroethane	Not detected	0.5	02/09/98	DG
1,1,2,2-Tetrachloroethane	Not detected	0.5	02/09/98	DG
Tetrachloroethene	Not detected	0.5	02/09/98	DG
Toluene	Not detected	0.5	02/09/98	DG
1,2,3-Trichlorobenzene	Not detected	0.5	02/09/98	DG
1,2,4-Trichlorobenzene	Not detected	0.5	02/09/98	DG
1,1,1-Trichloroethane	Not detected	0.5	02/09/98	DG
1,1,2-Trichloroethane	Not detected	0.5	02/09/98	DG
Trichloroethene	Not detected	0.5	02/09/98	DG
Trichlorofluoromethane	Not detected	0.5	02/09/98	DG
1,2,3-Trichloropropane	Not detected	0.5	02/09/98	DG
1,2,4-Trimethylbenzene	Not detected	0.5	02/09/98	DG
1,3,5-Trimethylbenzene	Not detected	0.5	02/09/98	DG
m,p-Xylenes	Not detected	1.0	02/09/98	DG
o-Xylene	Not detected	0.5	02/09/98	DG
Vinyl chloride	Not detected	0.5	02/09/98	DG
Methyl-t-butyl ether	Not detected	0.5	02/09/98	DG
Methyl Iodide	Not detected	0.5	02/09/98	DG
BFB Surrogate Recovery (%)	99		02/09/98	DG
p-DFB Surrogate Recovery (%)	100		02/09/98	DG
CLB-d5 Surrogate Recovery (%)	103		02/09/98	DG

Spectrum Analytical, Inc. Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. - EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected, Not Det, ND or nd	=	<i>The compound was not detected at a concentration equal to or above the established method detection limit.</i>
NC	=	<i>Not Calculated</i>
MCL	=	<i>EPA Maximum Contamination Level</i>
VOA	=	<i>Volatile Organic Analysis</i>
BFB	=	<i>4-Bromofluorobenzene (an EPA 624 Surrogate)</i>
p-DFB	=	<i>1,4-Difluorobenzene (an EPA 624 Surrogate)</i>
CLB-d5	=	<i>Chlorobenzene-d5 (an EPA 624 Surrogate)</i>
BCP	=	<i>2-Bromo-1-chloropropane (an EPA 601 Surrogate)</i>
TFT	=	<i>a,a,a-Trifluorotoluene (an EPA 602 Surrogate)</i>
Decachlorobiphenyl	=	<i>(an EPA 608/8080 Surrogate)</i>

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (%RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2})}{\text{ave. value}} * 100\%$$

CHAIN OF CUSTODY RECORD



Page 1 of 1

PROJECT NO.: <u>40068</u>	REPORT TO: <u>ECS-VT</u>
SITE NAME: <u>Fuiks Residence</u>	
LOCATION: <u>Wardsboro</u> STATE <u>VT</u>	ADDRESS:
REFERENCE QUOTE NUMBER (RQN):	CITY STATE ZIP
PURCHASE ORDER NO.:	INVOICE TO: <u>FCS-MA</u>
PROJECT Mgr: <u>S. Pittenger</u>	
SAMPLER(s): <u>SCP</u>	CITY STATE ZIP

SAMPLE TYPE & MATRIX CODES:				CONTAINERS				VOC's		SVOC's	TPH	METALS			OTHER																								
1 = 4°C 2 = HCl 3 = H ₂ SO ₄ 4 = HNO ₃ 5 = OTHER _____				# 40 ml VOA VIALS	# OF AMBER GLASS LITERS	# OF PLASTIC LITERS	# OF GLASS SOIL JARS	1-601/8010	2-602/8020	1-502/8021	2-524	1-624/8240	2-8260	2-KETONES	1-8270	2-BN	3-PAHS	1-PCBS	2-PEST (608/8080)	1-GC(8100M)	2-GC(8015M)	1-VPH	2-EPH	3-ID	1-IR(418.1)	2-OIL/GREASE	1 - Soluble	2 - Total	3 - TCLP	1-PH	2-FLASH	3-REACT							
C = COMPOSITE G = GRAB				PRESERVATIVE				1-MTBE		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS		1-PCBS							
1 = AQUEOUS 3 = SLUDGE 5 = OTHER				SAMPLE TYPE				1-601/8010		1-502/8021		1-624/8240		1-MTBE		1-8270		1-PCBS		1-GC(8100M)		1-VPH		1-IR(418.1)		PP13		RCRAB		As, Cd, Cr, Hg, Pb		1-PH		2-FLASH		3-REACT			
2 = SOIL 4 = SEDIMENT				MATRIX				1-601/8010		1-502/8021		1-624/8240		1-MTBE		1-8270		1-PCBS		1-GC(8100M)		1-VPH		1-IR(418.1)		PP13		RCRAB		As, Cd, Cr, Hg, Pb		1-PH		2-FLASH		3-REACT			
LAB USE ONLY	SAMPLE I.D.	DATE	TIME	MATRIX	SAMPLE TYPE	PRESERVATIVE	# 40 ml VOA VIALS	# OF AMBER GLASS LITERS	# OF PLASTIC LITERS	# OF GLASS SOIL JARS	1-601/8010	2-602/8020	1-502/8021	2-524	1-624/8240	2-8260	2-KETONES	1-MTBE	1-8270	2-BN	3-PAHS	1-PCBS	2-PEST (608/8080)	1-GC(8100M)	2-GC(8015M)	1-VPH	2-EPH	3-ID	1-IR(418.1)	2-OIL/GREASE	PP13	RCRAB	As, Cd, Cr, Hg, Pb	1-PH	2-FLASH	3-REACT			
AA 96778	F-DW	2/5	10:30	1	G		2																																
AA 96779	F-DUP	2/5	10:30	1	G		2																																
AA 96780	F-TRIP	2/5	10:30	1	G		1																																
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							
AA																																							

RELINQUISHED BY:	RECEIVED BY:	DATE	TIME
<u>Julia C. Kende</u> <u>C. Henning</u>	<u>C. Henning</u> <u>Michael Bentley</u>	<u>2/6/98</u> <u>2/6/98</u>	<u>11:40</u> <u>16:15</u>

SPECIAL INSTRUCTIONS: 8260 w/ DW detection limits

Fax results when available to (802) 257-1603

SPECIAL HANDLING: *Please check*

- Return Sample after Analysis
- Dispose of Sample after 60 days
- Standard TAT - 7 to 10 Business days
- Special TAT - 24 hr (48 hr) 72 hr - 5 Business days
- TAT begins when sample is received at test facility.
- TAT for samples rec'd after 3 pm will begin on the next business day.
- All TAT's are subject to laboratory approval and customer consent.

DATE RESULTS NEEDED: _____

Report Date:
19-May-04 13:32



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

RECEIVED MAY 27 2004

Laboratory Report

ECS/Marin
30 Harris Place
Brattleboro, VT 05301
Attn: David Balk

Project: Fulks Res - Wardsboro, VT
Project #: 40068

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SA12266-01	SB-Z	Soil	06-May-04 14:47	06-May-04 18:00
SA12266-02	TRIP	Methanol	06-May-04 08:00	06-May-04 18:00

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 7 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
Maine # MA138
New Hampshire # 2538
New York # 11393
Rhode Island # 98
USDA # S-51435



Authorized by:

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

Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

ENVIRONMENTAL ANALYSES

Sample Identification
SB-Z
 SA12266-01

Client Project #
 40068

Matrix
 Soil

Collection Date/Time
 06-May-04 14:47

Received
 06-May-04

<u>Analyte(s)</u>	<u>Result</u>	<u>*RDL/Units</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>	<u>Flag</u>	
Volatile Organic Compounds										
VOC Extraction	Field Extracted	N/A	1	VOC	12-May-04	12-May-04	4050763	LN		
<u>Volatile Organic Compounds by 8260B</u>										
				Prepared by method SW846 5030 Soil MS					VOC10	
Benzene	BRL	81.8 ug/kg dry	50	SW846 8260B	14-May-04	14-May-04	4050875	tim		
Ethylbenzene	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
Methyl tert-butyl ether	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
Naphthalene	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
Toluene	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
1,2,4-Trimethylbenzene	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
1,3,5-Trimethylbenzene	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
m,p-Xylene	BRL	164 ug/kg dry	50	"	"	"	"	"		
o-Xylene	BRL	81.8 ug/kg dry	50	"	"	"	"	"		
<i>Surrogate: 4-Bromofluorobenzene</i>	103	70-130 %		"	"	"	"	"		
<i>Surrogate: Toluene-d8</i>	100	70-130 %		"	"	"	"	"		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	95.4	70-130 %		"	"	"	"	"		
<i>Surrogate: Dibromofluoromethane</i>	99.0	70-130 %		"	"	"	"	"		
Extractable Petroleum Hydrocarbons										
<u>Diesel Range Organics</u>										
				Prepared by method SW846 3545A						
Fuel Oil #2	BRL	37.4 mg/kg dry	1	8015BM/ME4.1.25	14-May-04	18-May-04	4050858	WB		
Fuel Oil #4	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
Fuel Oil #6	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
Motor Oil	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
Aviation Fuel	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
Unidentified	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
Other Oil	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
Diesel Range Organics	BRL	37.4 mg/kg dry	1	"	"	"	"	"		
<i>Surrogate: 1-Chlorooctadecane</i>	67.2	40-140 %		"	"	"	"	"		

This laboratory report is not valid without an authorized signature on the cover page.

*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification

SB-Z
SA12266-01

Client Project #
40068

Matrix
Soil

Collection Date/Time
06-May-04 14:47

Received
06-May-04

<i>Analyte(s)</i>	<i>Result</i>	<i>*RDL/Units</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>	<i>Flag</i>
-------------------	---------------	-------------------	-----------------	--------------------	-----------------	-----------------	--------------	----------------	-------------

General Chemistry Parameters

% Solids	75.9	%	1	SM2540 G Mod.	12-May-04	13-May-04	4050721	LN	
----------	------	---	---	---------------	-----------	-----------	---------	----	--

This laboratory report is not valid without an authorized signature on the cover page.

*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification
 TRIP
 SA12266-02

Client Project #
 40068

Matrix
 Methanol

Collection Date/Time
 06-May-04 08:00

Received
 06-May-04

<u>Analyte(s)</u>	<u>Result</u>	<u>*RDL/Units</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>	<u>Flag</u>
Volatile Organic Compounds									
<u>Volatile Organic Compounds by 8260B</u>		Prepared by method SW846 5030 Soil MS							
Benzene	BRL	38.2 ug/kg wet	50	SW846 8260B	14-May-04	14-May-04	4050875	tim	
Ethylbenzene	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
Methyl tert-butyl ether	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
Naphthalene	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
Toluene	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
m,p-Xylene	BRL	76.4 ug/kg wet	50	"	"	"	"	"	
o-Xylene	BRL	38.2 ug/kg wet	50	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102	70-130 %		"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>	103	70-130 %		"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.2	70-130 %		"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>	101	70-130 %		"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4050875 - SW846 5030 Soil MS										
Blank (4050875-BLK1)				Prepared & Analyzed: 14-May-04						
Benzene	BRL		1.0 ug/kg wet							
Ethylbenzene	BRL		1.0 ug/kg wet							
Methyl tert-butyl ether	BRL		1.0 ug/kg wet							
Naphthalene	BRL		1.0 ug/kg wet							
Toluene	BRL		1.0 ug/kg wet							
1,2,4-Trimethylbenzene	BRL		1.0 ug/kg wet							
1,3,5-Trimethylbenzene	BRL		1.0 ug/kg wet							
m,p-Xylene	BRL		2.0 ug/kg wet							
o-Xylene	BRL		1.0 ug/kg wet							
<i>Surrogate: 4-Bromofluorobenzene</i>	51.0		ug/kg wet	50.0		102	70-130			
<i>Surrogate: Toluene-d8</i>	51.8		ug/kg wet	50.0		104	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.9		ug/kg wet	50.0		99.8	70-130			
<i>Surrogate: Dibromofluoromethane</i>	50.6		ug/kg wet	50.0		101	70-130			
Matrix Spike (4050875-MS1)				Source: SA12384-01 Prepared & Analyzed: 14-May-04						
Benzene	17.5		ug/kg dry	20.0	BRL	87.5	70-130			
Chlorobenzene	17.6		ug/kg dry	20.0	BRL	88.0	70-130			
1,1-Dichloroethene	14.2		ug/kg dry	20.0	BRL	71.0	70-130			
Toluene	18.4		ug/kg dry	20.0	BRL	92.0	70-130			
Trichloroethene	16.6		ug/kg dry	20.0	BRL	83.0	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	48.6		ug/kg dry	50.0		97.2	70-130			
<i>Surrogate: Toluene-d8</i>	50.5		ug/kg dry	50.0		101	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	46.8		ug/kg dry	50.0		93.6	70-130			
<i>Surrogate: Dibromofluoromethane</i>	50.4		ug/kg dry	50.0		101	70-130			
Matrix Spike Dup (4050875-MSD1)				Source: SA12384-01 Prepared & Analyzed: 14-May-04						
Benzene	18.1		ug/kg dry	20.0	BRL	90.5	70-130	3.37	30	
Chlorobenzene	18.0		ug/kg dry	20.0	BRL	90.0	70-130	2.25	30	
1,1-Dichloroethene	14.6		ug/kg dry	20.0	BRL	73.0	70-130	2.78	30	
Toluene	18.7		ug/kg dry	20.0	BRL	93.5	70-130	1.62	30	
Trichloroethene	17.8		ug/kg dry	20.0	BRL	89.0	70-130	6.98	30	
<i>Surrogate: 4-Bromofluorobenzene</i>	47.0		ug/kg dry	50.0		94.0	70-130			
<i>Surrogate: Toluene-d8</i>	49.8		ug/kg dry	50.0		99.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	44.7		ug/kg dry	50.0		89.4	70-130			
<i>Surrogate: Dibromofluoromethane</i>	49.4		ug/kg dry	50.0		98.8	70-130			

This laboratory report is not valid without an authorized signature on the cover page.

*Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

vext2 Field Extracted

VOC10 The VOC field preserved soil sample is not within the recommended 1:1 weight to volume ratio. This is based on SW846 methods 5030 and 5035.

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

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. The RDL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. 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

SA 12 2004



SPECTRUM ANALYTICAL, INC.
Featuring
HANTHAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

- Special Handling:
- Standard TAT - 7 to 10 business days
 - Rush TAT - Date Needed: _____
 - All TATs subject to laboratory approval.
 - Min. 24-hour notification needed for rushes.
 - All samples are disposed of after 60 days unless otherwise instructed.

Page 1 of 1

Report To: ECS-BRATTLEBORO

Invoice To: ECS-AGAWAM

Project No.: 40068

Site Name: FULKS RES.

Location: WARDSBORO State: VT

Project Mgr.: D. BALK

P.O. No.: _____ RQN: _____

Sampler(s): R. KEMP

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=4°C (ice) 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=methanol blank X2=_____ X3=_____

Containers: _____ Analyses: _____ Notes: _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8260B VT 900 Scan	DRO	Analyses	Notes
SA 122660	SB-Z	5/6/04	2:47	G	SO	7,9	2	1			X	X		
V-02	TRIP	5/6/04	8:00	G	X1	7,9	1	0			X	X		

Relinquished by: _____ Received by: _____ Date: _____ Time: _____

R. Balk Mary Newman 5/6/04 1800

Fax results when available to (____) _____

E-mail results when available to DBALK@ECSCONSULT.COM

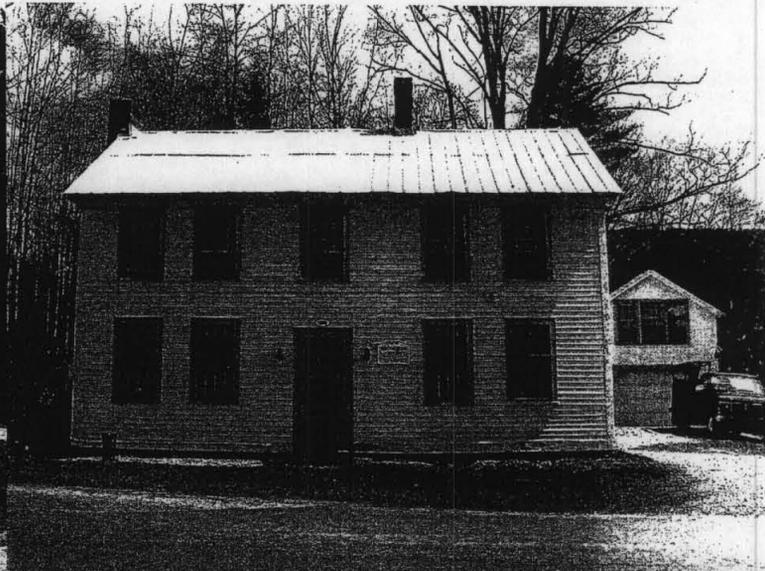
Condition upon Receipt: Iced Ambient 4 °C

APPENDIX B

PHOTO OF PREMARK FOR DRILLING AND GRAVEL/COBBLES
ENCOUNTERED IN SOIL BORINGS

Job #04-201919 - Fuiks Residence
300 Main Street
Wardsboro, VT

Premark: 4/22/04
Personel: R. Kemp



Job #04-201919 - Fuiks Residence
300 Main Street
Wardsboro, VT
Drilling: 5/6/04

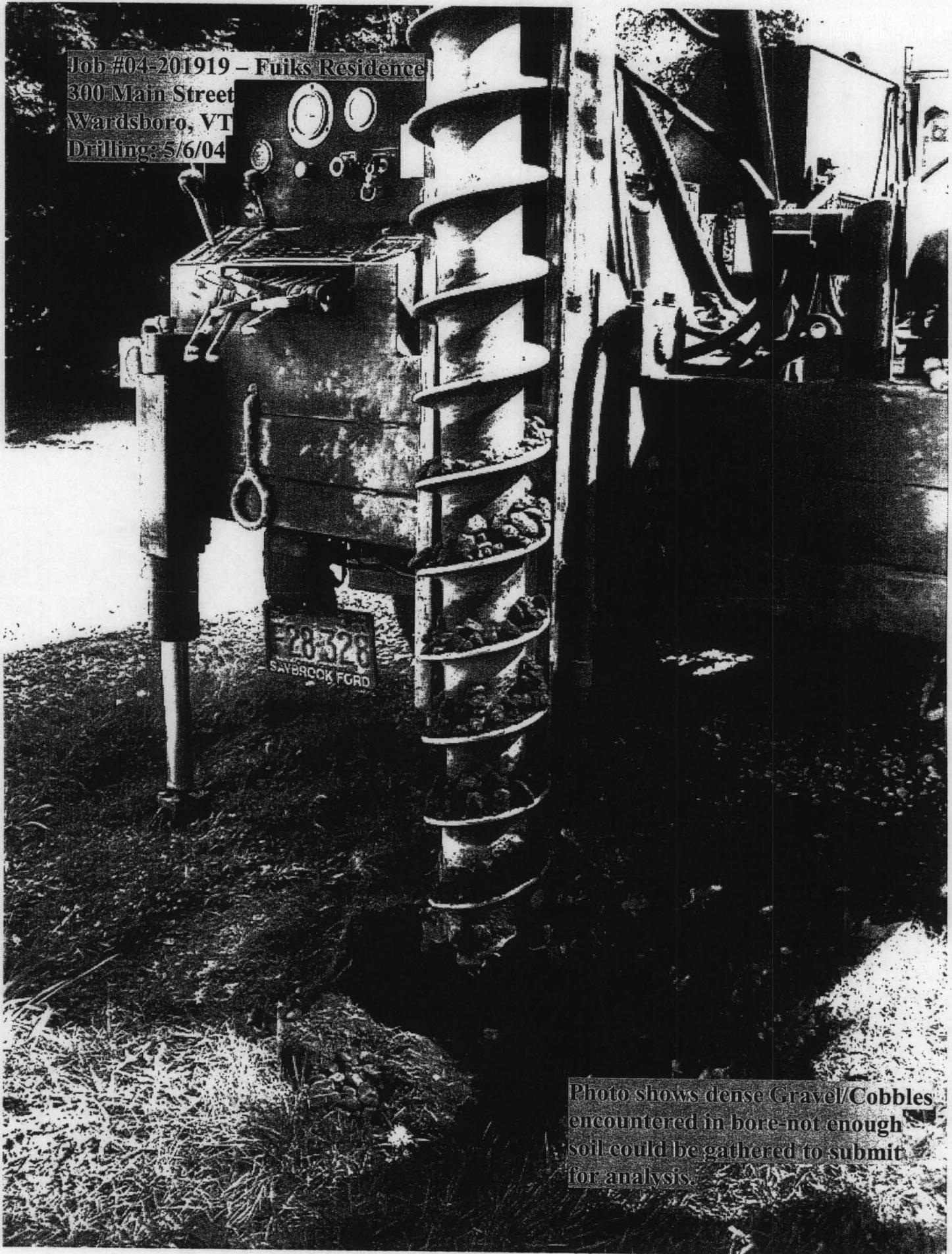


Photo shows dense Gravel/Cobbles encountered in bore-not enough soil could be gathered to submit for analysis.

APPENDIX C
SOIL BORING LOGS

Environmental Compliance Services, Inc. 30 Harris Place, Brattleboro, Vermont 05301				SOIL BORING and MONITORING WELL INSTALLATION LOG				BORING NO.: SB-1 (sb-Z)			
BORING COMPANY: Environmental Compliance Services, Inc.				JOB NUMBER: 04-201919		DOCUMENT NO.:					
BORING COMPANY ADDRESS: 588 Silver Street, Agawam, MA				PROJECT NAME: Fuiks/Warren Williams Res.		SHEET 3 OF 3		See Site Plan			
FOREMAN: Stan Werbicki & Scott				PROJECT ADDRESS: 300 Main Street Wardsboro, VT		See Site Plan					
ECS INSPECTOR: Randall Kemp				CLIENT NAME: Warren Williams						See Site Plan	
GROUNDWATER OBSERVATIONS				CASING		SAMPLER					
Date	Depth	Stabilization Time	TYPE	Hollow Stem Auger	Split Spoon	Casing Elevation (ft.)					
			INSIDE DIAMETER	4.25"	1 3/8"	PVC Elevation (ft.)					
			HAMMER WEIGHT		140 lbs	Surface Elevation (ft.)					
			HAMMER FALL		30"	Date Started		5/8/2004			
			NOTES:			Date Completed		5/6/2004			
Depth	Sample Number	Sample Depths	Penetration/ Recovery	Blows per 6" penetration	Strata Changes	Soil Descriptions		Well As Built	Field Testing	Notes	
5						dry, fine SAND & Silty Clay (UST grave fill)					
10					End of Bore	Refusal at 5 feet - sample gathered off auger flights					
15											
20											
25											
30											
35											
40											
<p>1. Field testing values represent total volatile organic vapors (referenced to a benzene standard) measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Photovac Model 2020 photoionization detector (PID). Results reported in parts per million by volume (ppmv). Detection limit calibrated to 0.2 ppmv.</p> <p>2. Groundwater not encountered.</p> <p>3. Monitoring well not installed</p> <p>  Depth of Groundwater  Natural Fill.  Well sand.  Well screen.  Bentonite seal. </p>											

Environmental Compliance Services, Inc. 30 Harris Place, Brattleboro, Vermont 05301		SOIL BORING and MONITORING WELL INSTALLATION LOG		BORING NO.:	SB-2 (sb-Y)		
				DOCUMENT NO.:			
				SHEET	2	OF	3
LOCATION							

BORING COMPANY:	Environmental Compliance Services, Inc.	JOB NUMBER:	04-201919
BORING COMPANY ADDRESS:	588 Silver Street, Agawam, MA	PROJECT NAME:	Fuiks/Warren Williams Res.
FOREMAN:	Stan Werbicki & Scott	PROJECT ADDRESS:	300 Main Street Wardsboro, VT
ECS INSPECTOR:	Randall Kemp	CLIENT NAME:	Warren Williams

See Site Plan

GROUNDWATER OBSERVATIONS			CASING	SAMPLER	CORE BARREL
Date	Depth	Stabilization Time	TYPE		
			Hollow Stem Auger	Split Spoon	
			INSIDE DIAMETER	4.25"	1 3/8"
			HAMMER WEIGHT		140 lbs
			HAMMER FALL		30"
			NOTES:		
					Casing Elevation (ft.)
					PVC Elevation (ft.)
					Surface Elevation (ft.)
					Date Started
					5/6/2004
					Date Completed
					5/6/2004

Depth	Sample Number	Sample Depths	Penetration/ Recovery	Blows per 6" penetration	Strata Changes	Soil Descriptions	Well As Built	Field Testing	Notes
						dry, GRAVEL & COBBLES, little fine Sand - not enough soil to sample			
5					End of Bore	Refusal at 3 feet - no sample			
10									
15									
20									
25									
30									
35									
40									

1. Field testing values represent total volatile organic vapors (referenced to a benzene standard) measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Photovac Model 2020 photoionization detector (PID). Results reported in parts per million by volume (ppmv). Detection limit calibrated to 0.2 ppmv.
2. Groundwater not encountered.
3. Monitoring well not installed



Environmental Compliance Services, Inc. 30 Harris Place, Brattleboro, Vermont 05301				SOIL BORING and MONITORING WELL INSTALLATION LOG			BORING NO.: SB-3 (sb-X)			
BORING COMPANY: Environmental Compliance Services, Inc.				JOB NUMBER: 04-201919		See Site Plan				
BORING COMPANY ADDRESS: 588 Silver Street, Agawam, MA				PROJECT NAME: Fuiks/Warren Williams Res.						
FOREMAN: Stan Werbicki & Scott				PROJECT ADDRESS: 300 Main Street Wardsboro, VT						
ECS INSPECTOR: Randall Kemp				CLIENT NAME: Warren Williams						
GROUNDWATER OBSERVATIONS				CASING: Hollow Stem Auger						SAMPLER: Split Spoon
Date: Depth: Stabilization Time:			TYPE: INSIDE DIAMETER		4.25"		Casing Elevation (ft.):			
			HAMMER WEIGHT		140 lbs		PVC Elevation (ft.):			
			HAMMER FALL		30"		Surface Elevation (ft.):			
			NOTES:				Date Started: 5/6/2004			
							Date Completed: 5/6/2004			
Depth	Sample Number	Sample Depths	Penetration/ Recovery	Blows per 6" penetration	Strata Changes	Soil Descriptions		Well As Built	Field Testing	Notes
5						dry, GRAVEL & COBBLES, little fine Sand - not enough soil to sample				
					End of Bore	Refusal at 5 feet - no sample				
10										
15										
20										
25										
30										
35										
40										

1. Field testing values represent total volatile organic vapors (referenced to a benzene standard) measured in the headspace of sealed soil sample jars or Zip-lock™ bags, with a Photovac Model 2020 photoionization detector (PID). Results reported in parts per million by volume (ppmv). Detection limit calibrated to 0.2 ppmv.

2. Groundwater not encountered.

3. Monitoring well not installed.