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# Voluntary Cleanup Program

## **Progress Report**

**January 2010**

Former Churchville Ford Site (#V00658-8)  
111 South Main Street  
Village of Churchville  
Monroe County, New York

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This progress report covers the month of January 2010.

### **Activities Relative to Site for Period**

On April 29, 2009 Okar Equipment Company, Inc. granted Lu Engineers a notice to proceed with the activities outlined in the NYSDEC approved Remedial Action Work Plan, dated December 2008.

In the month of May 2009, Lu Engineers supervised the installation of 5 shallow injection wells by Trec Environmental as per the approved RA Work Plan. Four of the wells were installed inside the building, up-gradient and cross-gradient from the source area. One injection well was installed outside, north of the source area.

In the month of June 2009, Lu Engineers and Trec Environmental, Inc. conducted the first two injection events of 3% permanganate solution at the Former Churchville Ford facility. This process included correspondence and coordination with Region 8 of the NYSDEC.

During the month of July 2009, two permanganate injection events were conducted. The third overall event was completed on July 7, 2009 and the fourth event was completed on July 22, 2009. A total volume of 173.5 gallons of 3% permanganate solution was injected in July 2009. The permanganate solution was introduced by gravity in monitoring wells MW-1, MW-3 and MW-6 as outlined in the RAWP.

During the month of August 2009, one permanganate injection event was conducted. On August 4, 2009 (fifth injection event) a total of 134 gallons of 3% permanganate solution was injected into the groundwater. On August 25, 2009, a new injection well was installed within the source area. This well was placed between existing wells MW-JCL-2 and MW-3. The new well was screened from 17 to 12 ft. bgs.

On September 4, 2009 Lu Engineers issued a *Technical Memorandum* to the NYSDEC describing chemox injection progress, difficulties encountered with vertical and horizontal dispersion of permanganate solution as well as the details associated with the proposed source-area injection well (installed 8/25/09). The sixth injection event was conducted on September 16, 2009. A total of 69 gallons of 3% permanganate solution was injected into the groundwater. Due to mechanical problems with the GS2000 injection pump pertaining to possible HASP concerns, no other injection was conducted on this day.

Two injection events were conducted during the month of October. On October 9, a total of 174 gallons of 3% permanganate solution was injected into the groundwater. Each of the 5 interior injection wells received 23 gallons of solution while the new source area well received 46 gallons. On October 30, the eighth injection event was conducted in which 176 gallons of 3% permanganate solution was injected into the groundwater at the same locations.

On November 20, 2009 one injection event was conducted in which a total of 176 gallons of 3% permanganate solution was injected into the groundwater. Each of the 5 interior injection wells received 23 gallons of solution while the new source area well received 46 gallons.

On December 11, 2009 one injection event was conducted in which 69 gallons of 3% permanganate solution was injected. Source area injection well IW-JCL-8 received 46 gallons and interior injection well IW-JCL-7 received 23 gallons. Approximately 204 gallons of 3% permanganate solution remains to be injected as per the approved RAWP.

On January 15, 2010 the final injection event was conducted in which the remaining 204 gallons of 3% permanganate solution was injected. Source area injection well IW-JCL-8 received 54 gallons and the 5 interior injection wells received 27 gallons each. Exterior monitoring well MW-1 received 10 gallons by gravity and interior monitoring well MW-6 received 5 gallons by gravity. Following the injection process, monitoring wells MW-JCL-2 and MW-JCL-3, MW-13 were purged and sampled as outlined in the Remedial Action Work Plan. Samples were sent to an accredited laboratory for analysis of VOCs (8260B) and TAL Metals.

#### **Activities Anticipated for Next Period**

Site activities planned for next month include collection of another round of groundwater samples from wells MW-JCL-2, MW-JCL-3, MW-13 as per the RAWP. In addition to groundwater sampling, soil vapor intrusion sampling will also be conducted as per the RAWP before the end of the heating season. This sampling event will include the collection of a total of 5 vapor samples. A sub-slab vapor sample and indoor air sample will each be collected at two separate interior locations as well as an outdoor ambient sample.

#### **Approved Site Activity Modifications**

There were no modifications made to Site activities during this period.

#### **Sampling/Testing Results**

As per the RAWP, three site monitoring wells were purged and sampled by bailer for VOCs and TAL Metals on January 15, 2010 (MW-JCL-2, MW-JCL-3 & MW-13). Laboratory analytical results are attached to this report and indicate that no VOC contaminants were detected in wells MW-13 and MW-JCL-3. In source area well MW-JCL-2 no chlorinated VOC contaminants were detected in January. The only VOC contaminant detected in this well in January was acetone at a concentration of 12.9 ug/L. Lu Engineers is currently reviewing past data in which acetone was previously detected in multiple site wells in an effort to make a determination as to the cause of this latest detection. Based on the January results it appears that the permanganate oxidant solution is effectively destroying the contaminants of concern within the source area.



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

## Analytical Report Cover Page

### **Lu Engineers**

For Lab Project # 10-0288  
Issued January 22, 2010  
This report contains a total of 8 pages

The reported results relate only to the samples as they have been received by the laboratory.

Any noncompliant QC parameters having impact on the data are flagged or documented on the final report.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

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The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of frequently used data flags and their meaning:

**"ND" = analyzed for but not detected.**

**"E" = Result has been estimated, calibration limit exceeded.**

**"D" = Duplicate results outside QC limits. May indicate a non-homogenous matrix.**

**"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.**

**"B" = Method blank contained trace levels of analyte. Refer to included method blank report.**

<b>Client:</b>	<u>Lu Engineers</u>	<b>Lab Project No.:</b>	10-0288
<b>Client Job Site:</b>	Former Churchville Ford Site - Remedial Inj.	<b>Lab Sample No.:</b>	1756
<b>Client Job No.:</b>	N/A	<b>Sample Type:</b>	Water
<b>Field Location:</b>	MW-13	<b>Date Sampled:</b>	01/15/2010
<b>Field ID No.:</b>	N/A	<b>Date Received:</b>	01/15/2010

**Laboratory Report for TAL Metals Analysis in Waters**

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	01/20/2010	SW846 6010	32.3
Antimony	01/20/2010	SW846 6010	<0.060
Arsenic	01/20/2010	SW846 6010	0.013
Barium	01/20/2010	SW846 6010	0.329
Beryllium	01/20/2010	SW846 6010	<0.005
Cadmium	01/20/2010	SW846 6010	<0.005
Calcium	01/20/2010	SW846 6010	215
Chromium	01/20/2010	SW846 6010	0.038
Cobalt	01/20/2010	SW846 6010	0.021
Copper	01/20/2010	SW846 6010	0.039
Iron	01/20/2010	SW846 6010	40.6
Lead	01/20/2010	SW846 6010	0.053
Magnesium	01/20/2010	SW846 6010	62.4
Manganese	01/20/2010	SW846 6010	1.58
Mercury	01/19/2010	SW846 7470	<0.0002
Nickel	01/20/2010	SW846 6010	0.044
Potassium	01/21/2010	SW846 6010	13.8
Selenium	01/21/2010	SW846 6010	<0.005
Silver	01/20/2010	SW846 6010	<0.010
Sodium	01/21/2010	SW846 6010	13.1
Thallium	01/20/2010	SW846 6010	<0.006
Vanadium	01/20/2010	SW846 6010	0.061
Zinc	01/20/2010	SW846 6010	0.524

ELAP ID No.:10958

Comments:

 Approved By: 

Bruce Hbogsteger, Technical Director

<b>Client:</b>	<u>Lu Engineers</u>	<b>Lab Project No.:</b>	10-0288
		<b>Lab Sample No.:</b>	1757
<b>Client Job Site:</b>	Former Churchville Ford Site - Remedial Inj.	<b>Sample Type:</b>	Water
<b>Client Job No.:</b>	N/A	<b>Date Sampled:</b>	01/15/2010
		<b>Date Received:</b>	01/15/2010
<b>Field Location:</b>	MW-JCL-3		
<b>Field ID No.:</b>	N/A		

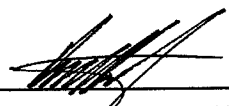
**Laboratory Report for TAL Metals Analysis in Waters**

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	01/20/2010	SW846 6010	12.8
Antimony	01/20/2010	SW846 6010	<0.060
Arsenic	01/20/2010	SW846 6010	0.010
Barium	01/20/2010	SW846 6010	0.216
Beryllium	01/20/2010	SW846 6010	<0.005
Cadmium	01/20/2010	SW846 6010	<0.005
Calcium	01/20/2010	SW846 6010	186
Chromium	01/20/2010	SW846 6010	0.020
Cobalt	01/20/2010	SW846 6010	<0.010
Copper	01/20/2010	SW846 6010	0.019
Iron	01/20/2010	SW846 6010	20.0
Lead	01/20/2010	SW846 6010	0.016
Magnesium	01/20/2010	SW846 6010	88.4
Manganese	01/20/2010	SW846 6010	0.324
Mercury	01/19/2010	SW846 7470	<0.0002
Nickel	01/20/2010	SW846 6010	<0.040
Potassium	01/21/2010	SW846 6010	7.51
Selenium	01/21/2010	SW846 6010	<0.005
Silver	01/20/2010	SW846 6010	<0.010
Sodium	01/21/2010	SW846 6010	51.5
Thallium	01/20/2010	SW846 6010	<0.006
Vanadium	01/20/2010	SW846 6010	0.026
Zinc	01/20/2010	SW846 6010	0.119

ELAP ID No.:10958

Comments:

Approved By:

  
 Bruce Hoogesteger, Technical Director



**Client:** Lu Engineers

**Lab Project No.:** 10-0288

**Lab Sample No.:** 1758

**Client Job Site:** Former Churchville Ford  
Site - Remedial Inj.

**Sample Type:** Water

**Client Job No.:** N/A

**Date Sampled:** 01/15/2010

**Date Received:** 01/15/2010

**Field Location:** MW-JCL-2

**Field ID No.:** N/A

**Laboratory Report for TAL Metals Analysis in Waters**

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	01/21/2010	SW846 6010	5.09
Antimony	01/21/2010	SW846 6010	<0.300
Arsenic	01/21/2010	SW846 6010	<0.025
Barium	01/21/2010	SW846 6010	0.347
Beryllium	01/21/2010	SW846 6010	<0.025
Cadmium	01/21/2010	SW846 6010	<0.025
Calcium	01/21/2010	SW846 6010	102
Chromium	01/21/2010	SW846 6010	<0.050
Cobalt	01/21/2010	SW846 6010	<0.050
Copper	01/21/2010	SW846 6010	<0.050
Iron	01/21/2010	SW846 6010	31.6
Lead	01/21/2010	SW846 6010	<0.025
Magnesium	01/21/2010	SW846 6010	72.6
Manganese	01/21/2010	SW846 6010	38.0
Mercury	01/19/2010	SW846 7470	<0.0020
Nickel	01/21/2010	SW846 6010	<0.200
Potassium	01/21/2010	SW846 6010	10.4
Selenium	01/21/2010	SW846 6010	<0.025
Silver	01/21/2010	SW846 6010	<0.050
Sodium	01/21/2010	SW846 6010	87.1
Thallium	01/21/2010	SW846 6010	<0.030
Vanadium	01/21/2010	SW846 6010	<0.050
Zinc	01/21/2010	SW846 6010	0.560

ELAP ID No.:10958

Comments:

Approved By: 

Bruce Hoogesteger, Technical Director

### Volatile Analysis Report for Non-potable Water

**Client:** Lu Engineers

<b>Client Job Site:</b> Former Churchville Ford Site	<b>Lab Project Number:</b> 10-0288
Remedial Inj.	<b>Lab Sample Number:</b> 1756
<b>Client Job Number:</b> N/A	<b>Date Sampled:</b> 01/15/2010
<b>Field Location:</b> MW-13	<b>Date Received:</b> 01/15/2010
<b>Field ID Number:</b> N/A	<b>Date Analyzed:</b> 01/18/2010
<b>Sample Type:</b> Water	

Halocarbons	Results in ug / L
Bromodichloromethane	ND< 2.00
Bromomethane	ND< 2.00
Bromoform	ND< 5.00
Carbon Tetrachloride	ND< 2.00
Chloroethane	ND< 2.00
Chloromethane	ND< 2.00
2-Chloroethyl vinyl Ether	ND< 10.0
Chloroform	ND< 2.00
Dibromochloromethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
1,2-Dichloropropane	ND< 2.00
cis-1,3-Dichloropropene	ND< 2.00
trans-1,3-Dichloropropene	ND< 2.00
Methylene chloride	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
Trichlorofluoromethane	ND< 2.00
Vinyl chloride	ND< 2.00

Aromatics	Results in ug / L
Benzene	ND< 0.700
Chlorobenzene	ND< 2.00
Ethylbenzene	ND< 2.00
Toluene	ND< 2.00
m,p-Xylene	ND< 2.00
o-Xylene	ND< 2.00
Styrene	ND< 5.00
1,2-Dichlorobenzene	ND< 2.00
1,3-Dichlorobenzene	ND< 2.00
1,4-Dichlorobenzene	ND< 2.00

Ketones	Results in ug / L
Acetone	ND< 10.0
2-Butanone	ND< 10.0
2-Hexanone	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00

Miscellaneous	Results in ug / L
Carbon disulfide	ND< 5.00
Vinyl acetate	ND< 5.00

ELAP Number 10958

Method: EPA 8260B

Data File: V72161.D

Comments: ND denotes Non Detect  
 ug / L = microgram per Liter

Signature:

  
 \_\_\_\_\_  
 Bruce Hoogesteger, Technical Director



**Volatile Analysis Report for Non-potable Water**

**Client:** Lu Engineers

**Client Job Site:** Former Churchville Ford Site  
Remedial Inj.  
**Client Job Number:** N/A  
**Field Location:** MW-JCL-3  
**Field ID Number:** N/A  
**Sample Type:** Water

**Lab Project Number:** 10-0288  
**Lab Sample Number:** 1757  
**Date Sampled:** 01/15/2010  
**Date Received:** 01/15/2010  
**Date Analyzed:** 01/18/2010

Halocarbons	Results in ug / L
Bromodichloromethane	ND< 2.00
Bromomethane	ND< 2.00
Bromoform	ND< 5.00
Carbon Tetrachloride	ND< 2.00
Chloroethane	ND< 2.00 M
Chloromethane	ND< 2.00
2-Chloroethyl vinyl Ether	ND< 10.0
Chloroform	ND< 2.00
Dibromochloromethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
1,2-Dichloropropane	ND< 2.00
cis-1,3-Dichloropropene	ND< 2.00
trans-1,3-Dichloropropene	ND< 2.00
Methylene chloride	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
Trichlorofluoromethane	ND< 2.00
Vinyl chloride	ND< 2.00

Aromatics	Results in ug / L
Benzene	ND< 0.700
Chlorobenzene	ND< 2.00
Ethylbenzene	ND< 2.00
Toluene	ND< 2.00
m,p-Xylene	ND< 2.00
o-Xylene	ND< 2.00
Styrene	ND< 5.00
1,2-Dichlorobenzene	ND< 2.00
1,3-Dichlorobenzene	ND< 2.00
1,4-Dichlorobenzene	ND< 2.00

Ketones	Results in ug / L
Acetone	ND< 10.0
2-Butanone	ND< 10.0
2-Hexanone	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00

Miscellaneous	Results in ug / L
Carbon disulfide	ND< 5.00
Vinyl acetate	ND< 5.00

ELAP Number 10958

Method: EPA 8260B

Data File: V72162.D

Comments: ND denotes Non Detect  
ug / L = microgram per Liter

Signature: \_\_\_\_\_

  
Bruce Hoogesteger: Technical Director

### Volatile Analysis Report for Non-potable Water

**Client:** Lu Engineers
**Client Job Site:** Former Churchville Ford Site  
 Remedial Inj.

**Lab Project Number:** 10-0288

**Lab Sample Number:** 1758

**Client Job Number:** N/A

**Field Location:** MW-JCL-2

**Date Sampled:** 01/15/2010

**Field ID Number:** N/A

**Date Received:** 01/15/2010

**Sample Type:** Water

**Date Analyzed:** 01/18/2010

<b>Halocarbons</b>	<b>Results in ug / L</b>
Bromodichloromethane	ND< 2.00
Bromomethane	ND< 2.00
Bromoform	ND< 5.00
Carbon Tetrachloride	ND< 2.00
Chloroethane	ND< 2.00
Chloromethane	ND< 2.00
2-Chloroethyl vinyl Ether	ND< 10.0
Chloroform	ND< 2.00
Dibromochloromethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
1,2-Dichloropropane	ND< 2.00
cis-1,3-Dichloropropene	ND< 2.00
trans-1,3-Dichloropropene	ND< 2.00
Methylene chloride	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
Trichlorofluoromethane	ND< 2.00
Vinyl chloride	ND< 2.00

<b>Aromatics</b>	<b>Results in ug / L</b>
Benzene	ND< 0.700
Chlorobenzene	ND< 2.00
Ethylbenzene	ND< 2.00
Toluene	ND< 2.00
m,p-Xylene	ND< 2.00
o-Xylene	ND< 2.00
Styrene	ND< 5.00
1,2-Dichlorobenzene	ND< 2.00
1,3-Dichlorobenzene	ND< 2.00
1,4-Dichlorobenzene	ND< 2.00

<b>Ketones</b>	<b>Results in ug / L</b>
Acetone	12.9
2-Butanone	ND< 10.0
2-Hexanone	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00

<b>Miscellaneous</b>	<b>Results in ug / L</b>
Carbon disulfide	ND< 5.00
Vinyl acetate	ND< 5.00

ELAP Number 10958

Method: EPA 8260B

Data File: V72163.D

 Comments: ND denotes Non Detect  
 ug / L = microgram per Liter

Signature:

  
 Bruce Hoogesteger: Technical Director

# PARADIGM

**ENVIRONMENTAL SERVICES, INC.**

179 Lake Avenue  
Rochester, NY 14608  
(585) 647-2530 • (800) 724-1997  
FAX: (585) 647-3311

## CHAIN OF CUSTODY

REPORT TO:

INVOICE TO:

COMPANY: **Lu Engineers**  
ADDRESS: **2230 Penfield Rd**  
CITY: **Penfield** STATE: **NY** ZIP: **14526**  
PHONE: **377-1450** FAX: **377-1266**  
ATTN: **Greg Andrus**

COMPANY: **Lu Engineers**  
ADDRESS: **2230 Penfield Rd**  
CITY: **Penfield** STATE: **NY** ZIP: **14526**  
PHONE: **377-1450** FAX: **377-1266**  
ATTN: **Greg Andrus**

LAB PROJECT #: **10-0288** CLIENT PROJECT #:  
TURNAROUND TIME: (WORKING DAYS)  
QUOTE #:  1  2  3  4  5  
STD OTHER

PROJECT NAME/SITE NAME: **Former Churchville Food Site - Remedial Inv.**  
COMMENTS: **Email results to gregandrus@luengineers.com**  
REQUESTED ANALYSIS

DATE	TIME	COMPOSITE	GRADES	SAMPLE LOCATION/FIELD ID	MATRIX	CONTAMINANTS	REMARKS	PARADIGM LAB SAMPLE NUMBER
1/15/10	12:23			NW-13		VOCs 8260B TAL Metals		1756
2/15/10	1:10			NW-SCL-3			Voa's TCL per sample labels EDA/1/15	1757
3/15/10	13:30			NW-SCL-2				1758
4								
5								
6								
7								
8								
9								
10								

**\*\*LAB USE ONLY BELOW THIS LINE\*\***

Sample Condition: Per NELAC/EIAP 210/241/242/243/244

Receipt Parameter: **NELAC Compliance**

Container Type:  Y  N

Preservation:  Y  N

Comments: **HNO3 added to MW-SCL-3**

Holding Time:  Y  N

Temperature: **90C**  Y  N

Supplied By: **Christina Len** Date/Time: **1/15/10 13:50**

Relinquished By: **Christina Len** Date/Time: **1/15/10 13:50**

Received By: **Elizabeth A. Honck** Date/Time: **1/15/10 1410**

Total Cost:

P.I.F.