
Voluntary Cleanup Program

Progress Report

October 2009

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

This progress report covers the month of October 2009.

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. MW-1 received 9 gallons and MW-6 received 4 gallons of solution. MW-3 was not injected due to its close proximity to the new source area injection well and the hydraulic influence observed while conducting injection at the new well.

On October 30, 2009, the eighth injection event was conducted in which 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. MW-1 received 8 gallons, MW-6 received 5 gallons of solution, and MW-3 received 2 gallons due to its close proximity to the new source area injection well and the hydraulic influence observed while conducting injection at the new well.

Approximately 449 gallons of 3% permanganate solution remains to be injected as per the approved RAWP.

Activities Anticipated for Next Period

Site activities planned for next month include two injection events with the Remox solution, spaced approximately 2 weeks apart as well as a third round of groundwater sampling from wells MW-3, MW-13 and MW-JCL-2, as per the RAWP.

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 for VOCs and TAL Metals on this day (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, two of the three chlorinated VOC contaminants detected (cis-1,2-Dichloroethene and Trichloroethene) in the July 2009 groundwater samples were not detected in the October samples. The only VOC contaminant detected in the October sample was Tetrachloroethene at a concentration of 3.39 ug/L, which is significantly lower than the concentration of 67.6 ug/L detected in the July 2009 sample from this well. Based on these 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 # 09-3744
Issued October 16, 2009
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.

**PARADIGM**

ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client: Lu Engineers

Lab Project No.: 09-3744

Client Job Site: Former Churchville Ford

Lab Sample No.: 11484

Client Job No.: 5701-11

Sample Type: Water

Field Location: MW-JCL-2

Date Sampled: 10/09/2009

Field ID No.: N/A

Date Received: 10/12/2009

Laboratory Report for TAL Metals Analysis in Waters

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	10/15/2009	SW846 6010	0.234
Antimony	10/15/2009	SW846 6010	<0.060
Arsenic	10/15/2009	SW846 6010	<0.005
Barium	10/15/2009	SW846 6010	0.075
Beryllium	10/15/2009	SW846 6010	<0.005
Cadmium	10/15/2009	SW846 6010	<0.005
Calcium	10/15/2009	SW846 6010	79.9
Chromium	10/15/2009	SW846 6010	<0.010
Cobalt	10/15/2009	SW846 6010	<0.010
Copper	10/15/2009	SW846 6010	<0.010
Iron	10/15/2009	SW846 6010	2.45
Lead	10/15/2009	SW846 6010	<0.005
Magnesium	10/15/2009	SW846 6010	65.0
Manganese	10/15/2009	SW846 6010	2.36
Mercury	10/15/2009	SW846 7470	<0.0002
Nickel	10/15/2009	SW846 6010	<0.040
Potassium	10/15/2009	SW846 6010	6.22
Selenium	10/15/2009	SW846 6010	<0.005
Silver	10/15/2009	SW846 6010	<0.010
Sodium	10/16/2009	SW846 6010	22.3
Thallium	10/15/2009	SW846 6010	<0.006
Vanadium	10/15/2009	SW846 6010	<0.010
Zinc	10/15/2009	SW846 6010	0.023

ELAP ID No.:10958

Comments:

Approved By: _____

Bruce Hoogesteger, Technical Director

**PARADIGM**

ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client: Lu Engineers

Lab Project No.: 09-3744

Client Job Site: Former Churchville Ford

Lab Sample No.: 11485

Client Job No.: 5701-11

Sample Type: Water

Field Location: MW-13

Date Sampled: 10/09/2009

Field ID No.: N/A

Date Received: 10/12/2009

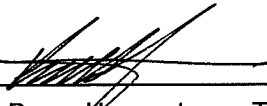
Laboratory Report for TAL Metals Analysis in Waters

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	10/15/2009	SW846 6010	0.715
Antimony	10/15/2009	SW846 6010	<0.060
Arsenic	10/15/2009	SW846 6010	0.017
Barium	10/15/2009	SW846 6010	0.193
Beryllium	10/15/2009	SW846 6010	<0.005
Cadmium	10/15/2009	SW846 6010	<0.005
Calcium	10/15/2009	SW846 6010	108
Chromium	10/15/2009	SW846 6010	<0.010
Cobalt	10/15/2009	SW846 6010	<0.010
Copper	10/15/2009	SW846 6010	<0.010
Iron	10/15/2009	SW846 6010	1.64
Lead	10/15/2009	SW846 6010	<0.005
Magnesium	10/15/2009	SW846 6010	23.4
Manganese	10/15/2009	SW846 6010	0.648
Mercury	10/15/2009	SW846 7470	<0.0002
Nickel	10/15/2009	SW846 6010	<0.040
Potassium	10/15/2009	SW846 6010	4.31
Selenium	10/15/2009	SW846 6010	<0.005
Silver	10/15/2009	SW846 6010	<0.010
Sodium	10/16/2009	SW846 6010	15.2
Thallium	10/15/2009	SW846 6010	<0.006
Vanadium	10/15/2009	SW846 6010	0.016
Zinc	10/15/2009	SW846 6010	0.029

ELAP ID No.:10958

Comments:

Approved By: _____


Bruce Hoogesteger, Technical Director

**PARADIGM**

ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client: Lu Engineers

Lab Project No.: 09-3744

Client Job Site: Former Churchville Ford

Lab Sample No.: 11486

Client Job No.: 5701-11

Sample Type: Water

Field Location: MW-JCL-3

Date Sampled: 10/09/2009

Field ID No.: N/A

Date Received: 10/12/2009

Laboratory Report for TAL Metals Analysis in Waters

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	10/15/2009	SW846 6010	1.27
Antimony	10/15/2009	SW846 6010	<0.060
Arsenic	10/15/2009	SW846 6010	<0.005
Barium	10/15/2009	SW846 6010	0.073
Beryllium	10/15/2009	SW846 6010	<0.005
Cadmium	10/15/2009	SW846 6010	0.008
Calcium	10/15/2009	SW846 6010	145
Chromium	10/15/2009	SW846 6010	<0.010
Cobalt	10/15/2009	SW846 6010	<0.010
Copper	10/15/2009	SW846 6010	<0.010
Iron	10/15/2009	SW846 6010	1.61
Lead	10/15/2009	SW846 6010	<0.005
Magnesium	10/15/2009	SW846 6010	70.4
Manganese	10/15/2009	SW846 6010	0.049
Mercury	10/15/2009	SW846 7470	<0.0002
Nickel	10/15/2009	SW846 6010	<0.040
Potassium	10/15/2009	SW846 6010	3.52
Selenium	10/15/2009	SW846 6010	<0.005
Silver	10/15/2009	SW846 6010	<0.010
Sodium	10/16/2009	SW846 6010	79.9
Thallium	10/15/2009	SW846 6010	<0.006
Vanadium	10/15/2009	SW846 6010	<0.010
Zinc	10/15/2009	SW846 6010	0.031

ELAP ID No.:10958

Comments:

Approved By: _____

Bruce Hoogesteger, Technical Director

**Volatile Analysis Report for Non-potable Water****Client:** Lu Engineers**Client Job Site:** Former Churchville Ford**Lab Project Number:** 09-3744**Lab Sample Number:** 11484**Client Job Number:** 5701-11**Field Location:** MW-JCL-2**Date Sampled:** 10/09/2009**Field ID Number:** N/A**Date Received:** 10/12/2009**Sample Type:** Water**Date Analyzed:** 10/12/2009

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	3.39
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: V69378.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**Lab Project Number:** 09-3744**Lab Sample Number:** 11485**Client Job Number:** 5701-11**Field Location:** MW-13**Date Sampled:** 10/09/2009**Field ID Number:** N/A**Date Received:** 10/12/2009**Sample Type:** Water**Date Analyzed:** 10/12/2009

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

ELAP Number 10958

Method: EPA 8260B

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

Data File: V69379.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**Lab Project Number:** 09-3744**Lab Sample Number:** 11486**Client Job Number:** 5701-11**Field Location:** MW-JCL-3**Date Sampled:** 10/09/2009**Field ID Number:** N/A**Date Received:** 10/12/2009**Sample Type:** Water**Date Analyzed:** 10/12/2009

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

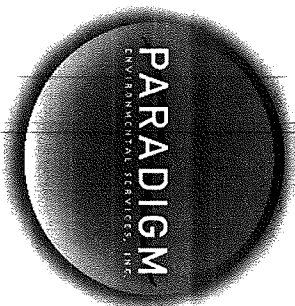
Method: EPA 8260B

Data File: V69380.D

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

Signature: _____

Bruce Hoogesteger: Technical Director

CHAIN OF CUSTODY
PARADIGM
 ENVIRONMENTAL SERVICES, INC.

REPORT TO:

INVOICE TO:

COMPANY: Lu Engineers	COMPANY: Same	LAB PROJECT #: 09.3744	CLIENT PROJECT #: 5701-11
ADDRESS: 2230 Penfield Rd.	ADDRESS:		
CITY: Penfield STATE: NY ZIP: 14526	CITY: STATE: ZIP:		
PHONE: 377-1450 FAX: 377-1266	PHONE: SAF FAX: SAF	TURNAROUND TIME: (WORKING DAYS)	

ATTN: **Greg Andrus**

ATTN:

ATTN: **Greg Andrus**

ATTN:

COMMENTS: **email results to edetweiler@luengineers.com**

REQUESTED ANALYSIS

Quotation #

1	2	3	4	5	OTHER
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Formex Churchillville Ford
CR ED KRH 10/12/09

DATE	TIME	COMPOSITE	GRADES	SAMPLE LOCATION/FIELD ID	MATERIALS	CONTAMINANTS	8260B VOCs	TAL Metals	REMARKS	PARADIGM LAB SAMPLE NUMBER
10/9/09	2:05		X	MW-JCL-2	water	3	2	1	*purple color IS	11484
10/9/09	2:15		X	MW-13		3	2	1	sodium permanganate	1485
10/9/09	2:30		X	MW-JCL-3	↓	3	2	1	VOCs = TCL list	11484
									per E. Detweiler	
									KRH 10/12/09	

LAB USE ONLY BELOW THIS LINE

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

Receipt Parameter NELAC Compliance

Container Type: Y ☒ N ☐Comments: Preservation: Y ☐ N ☒

Comments: H2O3 added to metals sat lab

Holding Time: Y ☒ N ☐Comments: Temperature: Y ☒ N ☐

Comments: pres. begun in field 18°C on 10/9

Enz Detweiler 10/9/09 *** will call w/ P.O.**

 Sampled By **Enz Detweiler** Date/Time **10/9/09 3:30** Total Cost:

 Relinquished By **Enz** Date/Time **10/9/09 1530**

 Received By **Emily Faumen** Date/Time **10/9/09 1712** P.L.F.

 Received @ Lab By **Emily Faumen** Date/Time **10/12/09 1050**