#### ENVIRONMENTAL CONSULTING & MANAGEMENT ROUX ASSOCIATES INC



1222 FOREST PARKWAY, SUITE 190 WEST DEPTFORD, NEW JERSEY 08066 856 423-8800 FAX 856 423-3220

April 14, 2010

Mr. John Grathwol, P.E. Division of Environmental Remediation New York State Department of Environmental Conservation 625 Broadway Albany, NY 12233-7010

Re: Annual Landfill Inspection Report (Year 6) Syracuse China Landfill Town of Salina, Onondaga County, New York NYSDEC Site Number 7-34-053

Dear Mr. Grathwol:

Roux Associates, Inc. (Roux Associates), on behalf of TPC-York Inc. (TPC-York), has prepared this letter report to summarize the required monitoring and sampling activities completed at the Syracuse China Landfill located in the Town of Salina, Onondaga County, New York (Site No. 7-34-053). In accordance with New York State Department of Environmental Conservation (NYSDEC) requirements, activities for the sixth year of Operations, Monitoring and Maintenance (OM&M) were performed at the site. Activities included groundwater and surface water sampling performed by Paradigm Environmental Services, Inc. (Paradigm) and a landfill inspection performed by Roux Associates. In accordance with the OM&M Plan prepared by Remedial Engineering, PC dated September 25, 2003 and the schedule approved by NYSDEC, the following activities were performed:

- Water-level gauging and collection of groundwater samples from monitoring wells MW-1, MW-2, MW-5, MW-6, MW-8 and MW-10 for lead analysis;
- Collection of surface-water samples from locations SW-1 and SW-2 for lead analysis;
- Inspection of key site features including the landfill surface, vegetation, fence, access road and drainage features such as rip rap swales and energy dissipaters; and
- Maintenance activities.

Sampling activities and results are discussed in greater detail below. Supporting figures and documentation are included at the end of this report.

# SAMPLING ACTIVITIES

Groundwater sampling was performed by Paradigm on March 18, 2009. Additional groundwater and surface water sampling was performed by Paradigm on September 29,

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2009. Groundwater levels were gauged and samples were collected from monitoring wells MW-1, MW-2, MW-5, MW-6, MW-8 and MW-10 using manual purge techniques. Surface-water samples were collected from locations SW-1 and SW-2. All samples were analyzed for lead.

The results of the sampling activities are summarized in the Site Monitoring, Inspection and Maintenance Forms provided in Appendix A. Laboratory analytical reports are provided in Appendix B. A site plan showing sampling locations is provided as Figure 1.

Sample results from the March 18, 2009 groundwater sampling event indicate that lead was not detected above the laboratory detection limit in any of the sampled monitoring wells.

Sample results from the September 29, 2009 sampling event indicate that lead was detected in MW-8 at a concentration of 0.021 milligrams per liter (mg/L) and in SW-2 at a concentration of 0.017 mg/L. The detected concentrations, however, are below the Technical and Operation Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards of 0.025 mg/L for lead in groundwater and 0.050 mg/L for lead in surface water. Lead was not detected above the laboratory detection limit in the remaining September 2009 samples.

Sample Identification	TOGS 1.1.1 Standard (mg/L)	3/18/2009 (mg/L)	9/29/2009 (mg/L)
MW-1	0.025	< 0.005	< 0.005
MW-2	0.025	< 0.005	< 0.005
MW-5	0.025	< 0.005	< 0.005
MW-6	0.025	< 0.005	< 0.005
MW-8	0.025	< 0.005	0.021
MW-10	0.025	< 0.005	< 0.005
SW-1	0.050		< 0.005
SW-2	0.050		0.017

A summary of sample results is provided below.

< = Not detected above the laboratory reporting limit

# LANDFILL MONITORING

Roux Associates conducted an inspection of the landfill and surrounding site areas on September 29, 2009. Roux Associates personnel inspected site vegetation at the eastern portion of the site, the landfill cap surface and the northern wetlands for any signs of erosion or significant settlement. Roux Associates also inspected the swales, drop chute, energy dissipation structures, permanent landfill gas vents GV-1 through GV-7, fencing, access road and Syracuse China signs for erosion, blockage or other damage. The results of Roux Associates' inspection activities are summarized in the Site Monitoring, Inspection and Maintenance Forms, provided as Appendix A. Photographs showing the condition of key site features are provided as Appendix C. A site plan showing key site features is provided as Figure 1.

Roux Associates' inspection of site features indicated that the site was generally in good condition with no significant erosion or differential settlement. The landfill surface was

#### ROUX ASSOCIATES INC

Mr. John Grathwol, P.E. April 14, 2010 Page 3 of 4

observed to be entirely stabilized with vegetation. The landfill drainage swales, drop chute and energy dissipation structures were observed to be in good condition with no visible blockage or washout. The permanent gas vents were also observed to be in good condition. The site access road was observed to be clear of vegetation, obstructions or significant rutting. The site fence was observed to be in good condition; however, moderate vegetation overgrowth was observed along the southern boundary fence. The signs on the fence within the Factory Avenue right-of-way were observed to be generally clear of vegetation.

## MAINTENANCE ACTIVITIES PERFORMED Fence Repairs

Fence repair activities were completed in response to an electronic correspondence provided by the NYSDEC and in response to fence damage observed during Roux Associates' 2008 annual landfill inspection. A discussion of the repair activities conducted was provided in the April 15, 2009 *Summary of Fence Maintenance and Repair Activities* letter report prepared by Roux Associates and submitted to NYSDEC.

## Mowing and Weed-Whacking

Annual mowing and weed-whacking activities were conducted by Mueller Farms from September 29, 2009 to October 1, 2009. Roux Associates was present during mowing and weed-whacking activities. Mowing was conducted on the landfill surface, within the eastern portion of the site (outside of wetland areas) and along the access road. Mowing and weed-whacking were conducted within the landfill surface swales to remove woody growth. Trimming was conducted around several Syracuse China fence signs to clear minor vegetation overgrowth.

# **PROPOSED YEAR 7 OM&M ACTIVITIES**

## Groundwater Monitoring

TPC-York is requesting that the ground-water sampling frequency be reduced to annually. This request is based on groundwater monitoring results to date. Lead concentrations in groundwater samples collected to date were all below the TOGS 1.1.1 Ambient Water Quality Standard of 0.025 mg/L for lead in groundwater with two minor exceptions: one sample in Year 2 and one sample in Year 5 (2008). As noted above, the two exceedances were minimal - - for example, 0.033 mg/L at MW-8 in 2008, only slightly above the 0.025 mg/L standard - - and were both attributed to sample turbidity.

Table 1 is a summary of OM&M groundwater data collected to date, including the statistical mean and 95% Upper Confidence Level (UCL) for lead in each monitoring well. The statistical mean and 95% UCL values are below the TOGS 1.1.1 Ambient Water Quality Standard of 0.025 mg/L for lead in groundwater in all of the monitoring wells.

# Surface Water Monitoring

TPC-York is requesting that surface water monitoring at the Site be eliminated. This request is based on surface water monitoring results to date. Lead concentrations in surface water samples collected to date are below the TOGS 1.1.1 Ambient Water Quality Standard of 0.050 mg/L for lead in surface water with one exception in Year 2.

Mr. John Grathwol, P.E. April 14, 2010 Page 4 of 4

The elevated lead concentration in SW-2, collected during the September 28, 2005 event (Year 2), was a result of inappropriate field collection procedures and significant sediment entrainment in the sample. As the lead result was an order of magnitude above the Standard, a second sample was collected on October 19, 2005, utilizing sampling techniques that resulted in less sediment disturbance, and analyzed for lead. Lead was not detected above the laboratory detection limit in the second sample collected.

Table 1 is a summary of OM&M surface water data collected to date, including the statistical mean and 95% UCL for lead at each surface sample location. The statistical mean and 95% UCL values are below the TOGS 1.1.1 Ambient Water Quality Standard of 0.050 mg/L for lead in surface water in all of the surface sampling locations.

# Proposed Year 7 OM&M Activities

The next OM&M event is scheduled to be performed in April 2010. Pending review of the proposed schedule, this event is currently planned to include:

• Water-level gauging and collection of groundwater samples from monitoring wells MW-1, MW-2, MW-5, MW-6, MW-8 and MW-10 for lead analysis.

As elevated turbidity is periodically observed in Site wells, Roux Associates proposes to have groundwater samples filtered in the laboratory prior to lead analysis.

In accordance with the OM&M Plan, the landfill will require annual mowing and weedwhacking in fall 2010 to prevent woody vegetation growth on the landfill cap and within the drainage swales. In addition, trimming will be required to remove vegetation growth over the signs on the Syracuse China fence and in the Factory Avenue right-of-way. Roux Associates proposes to conduct the annual landfill inspection concurrent with the 2010 mowing, weed-whacking and trimming activities.

Please call either of the undersigned with any questions regarding this report or proposal.

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Sincerely, ROUX ASSOCIATES, INC.

Monica LaSelva Project Scientist

Meredith Harris Principal Engineer

cc: Craig Bremer – TPC-York Elaine Enfonde – Nixon Peabody

Table 1. Summary of Operation, Monitoring and Maintenance Sampling Data. Syracuse China Landfill; Syracuse, New York.

	<b>TOGS 1.1.1</b>		Yea	ar 1				Year 2				Year 3			Year 4			Year 5		Ye	ar 6		95% Upper
	Standard	11/24/03	3/23/04	6/29/04	9/16/04	12/5/04	3/2/05	6/29/05	9/28/05	10/19/05	12/22/05	3/22/06	9/20/06	12/19/06	4/10/07	9/28/07	4/25/08	9/17/08	9/22/08	3/18/09	9/29/09		Confidence
Sample ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	mg/L)	(mg/L)	mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	mg/L)	(mg/L)	mg/L)	(mg/L)	(mg/L)	(mg/L)	Mean	Level
MW-1	0.025	< 0.003	0.005	0.005	< 0.001	< 0.001	< 0.001	0.009	0.018	NA	< 0.005	< 0.005	0.006	< 0.005	NS	< 0.005	< 0.005	< 0.005		< 0.005	< 0.005	0.0039	0.0059
MW-2	0.025	< 0.003	0.002	< 0.001	< 0.001	0.002	< 0.001	< 0.005	< 0.005	NA	< 0.005	$<\!0.005$	0.005	< 0.005	NS	< 0.005	< 0.005	< 0.005		< 0.005	< 0.005	0.0022	0.0027
MW-5	0.025	< 0.003	0.004	0.005	< 0.001	0.003	NA	< 0.005	< 0.005	NA	< 0.005	< 0.005	0.014	< 0.005	NS	< 0.005	< 0.005	< 0.005		< 0.005	< 0.005	0.0033	0.0048
MW-6	0.025	< 0.003	0.002	0.006	< 0.001	0.001	< 0.001	< 0.005	0.006	NA	0.01	< 0.005	< 0.005	< 0.005	NS	< 0.005	< 0.005	< 0.005		< 0.005	< 0.005	0.0029	0.0041
MW-8	0.025	< 0.003	0.04	0.002	< 0.001	0.005	< 0.001	0.02	0.052	NA	0.017	0.013	0.017	0.013	NS	< 0.005	< 0.005		0.033	< 0.005	0.021	0.0143	0.0215
MW-10	0.025	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	NA	< 0.005	0.005	0.008	< 0.005	NS	< 0.005	< 0.005		< 0.005	< 0.005	< 0.005	0.0023	0.0032
SW-1	0.05	< 0.003	< 0.001	0.002	< 0.001	0.041	< 0.001	< 0.005	< 0.005	NA		< 0.005	< 0.005	NS	< 0.005	0.008	0.013				< 0.005	0.0059	0.0114
SW-2	0.05	0.025	< 0.001	< 0.001	0.008	0.001	NA	0.005	0.622/<0.005	< 0.005		< 0.005	0.018	NS	0.007	0.009	0.018				0.017	0.0088	0.0134

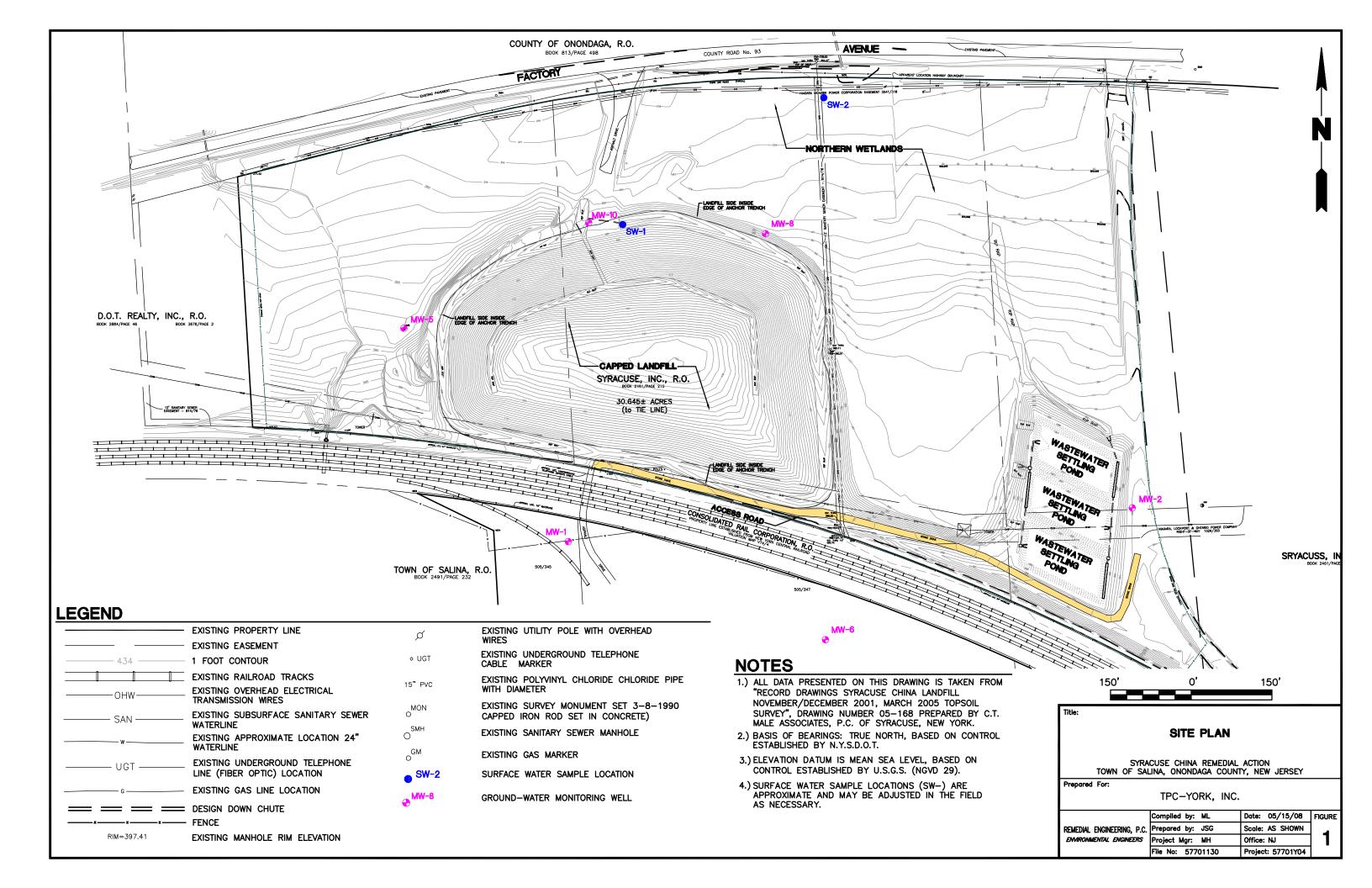
Notes:

< = Not detected above the laboratory reporting limit.

NA = Not Analyzed

1. For the purposes of statistical analysis, non-detected sample results were assumed to be one half of the laboratory reporting limit.

2. For the purposes of statistical analysis, the sample result indicating a detection of lead in surface water at 0.622 mg/L was eliminated from the calculations. Based on collection field notes, it appeared that the elevated lead concentration in SW-2 collected on 9/28/2005 was a result of significant sediment entrainment in the sample. As the SW-2 lead result was an order of magnitude above the TOGS 1.1.1 Standard, a second sample was collected for SW-2 on October 19, 2005, utilizing sampling techniques that resulted in less sediment disturbance, and analyzed for lead. Lead was not detected above the laboratory detection limit in the SW-2 sample collected on October 19, 2005.



# **APPENDIX** A

# SITE MONITORING, INSPECTION AND MAINTENANCE FORMS

Inspector: Andrew Simmons, Paradigm Environmental
Date: 3/18/2009

Date: <u>3/18/2009</u> Item	Action	Value	Notes	Corrective Action Suggested
MW-1 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	<0.005	TOGS 1.1.1 Standard = $0.025 \text{ mg/l}$	None
MW-1 <sup>a</sup>	Ground-Water Elevation (ft MSL)	399.8		None
MW-2 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-2 <sup>a</sup>	Ground-Water Elevation (ft MSL)	389.5		None
MW-5 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-5 <sup>a</sup>	Ground-Water Elevation (ft MSL)	387.4		None
MW-6 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = $0.025 \text{ mg/l}$	None
MW-6 <sup>a</sup>	Ground-Water Elevation (ft MSL)	409.7		None
MW-8 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-8 <sup>a</sup>	Ground-Water Elevation (ft MSL)	389.2		None
MW-10 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-10 <sup>a</sup>	Ground-Water Elevation (ft MSL)	379.6		None
GV-1 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
GV-2 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
GV-3 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
GV-4 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
GV-5 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
GV-6 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
GV-7 <sup>c</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
SW-1 <sup>b</sup>	SW Sample for Lead at Swales (mg/l)	NA	TOGS 1.1.1 Standard = 0.050 mg/l	None
SW-2 <sup>b</sup>	SW Sample for Lead at Northern Discharge (mg/l)	NA	TOGS 1.1.1 Standard = 0.050 mg/l	None
Eastern Portion of Site <sup>d</sup>	Inspect Vegetation	NA		Mowing scheduled for Sept. 2009
Eastern Portion of Site <sup>d</sup>	Mow Grass	NA		Mowing scheduled for Sept. 2009
Cap Surface <sup>d</sup>	Inspect Vegetation	NA		Mowing scheduled for Sept. 2009
Cap Surface <sup>d</sup>	Mow Grass	NA		Mowing scheduled for Sept. 2009

Inspector: Andrew Simmons, Paradigm Environmental

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	Date:	3/18/2009

Item	Action	Value	Notes	Corrective Action Suggested
Northern Wetland <sup>e</sup>	Inspect Vegetation	NA		None
Swales <sup>f</sup>	Inspect for Erosion	NA		Weed-whacking scheduled for Sept. 2009
Fence <sup>f</sup>	Inspect for Damage	NA		Repair damaged portions of fence
Signs on SC Fence <sup>f</sup>	Inspect for Damage	NA		Trimming scheduled for Sept. 2009
Signs on GM Fence <sup>f</sup>	Inspect for Damage	NA		Trimming scheduled for Sept. 2009
Access Road <sup>f</sup>	Inspect for Wear and Erosion	NA		Mowing scheduled for Sept. 2009
Drop Chute <sup>f</sup>	Inspect for Blockage	NA		Weed-whacking scheduled for Sept. 2009
Energy Dissipation Structures <sup>f</sup>	Inspect for Damage	NA		Annual inspection scheduled for Sept. 2009
Sitewide <sup>f</sup>	Inspect for Major Erosion Problems	NA		Annual inspection scheduled for Sept. 2009
Sitewide <sup>f</sup>	Inspect for Significant Differential Settlement	NA		Annual inspection scheduled for Sept. 2009

MW = Ground-Water Monitoring Well

SW = Surface Water

#### Notes and Assumptions

#### <sup>a</sup> Ground-Water Sampling

- 1. Ground-water sampling to be performed quarterly for years 1 and 2.
- 2. Ground-water sampling to be performed semi-annually for years 3 through 7.
- 3. Ground-water sampling to be performed annually for years 8 through 30.
- 4. NYSDEC will grant reduction of ground-water sampling, Part 360 requires quarterly sampling for minimum of :d Landfill Mowing and Repairs

#### <sup>c</sup> Surface-Water Sampling

- 1. Surface-water sampling to be performed quarterly for years 1 and 2.
- 2. Surface-water sampling to be performed semi-annually for years 3 through 4.
- 3. Surface-water sampling to be performed annually in year 5 through 7.
- 4. No surface-water sampling will be performed after year 7.

# <sup>b</sup> Landfill Gas Monitoring 1. Landfill gas monitoring to be performed annually for years 1 through 4.

GV = Permanent Landfill Gas Vent

NA = Not Analyzed

- 2. No landfill gas monitoring will be performed after year 4.
- 1. Landfill mowing to be performed annually for years 1 through 30.

SC = Syracuse China

GM = General Motors Corporation

#### <sup>e</sup> Wetlands Monitoring Activities

- 1. Wetlands vegetation inspection is for erosion only and is not part of the USACE-required activities.
- 5. NYSDEC will grant reduction of surface-water sampling, Part 360 requires quarterly sampling for minimum of <sup>f</sup>Annual Landfill Inspection and Reporting
  - 1. One inspection to be performed annually for years 1 through 30.

## **ROUX ASSOCIATES INC**

Inspector: Andrew Simmons, Paradigm Environmental / Monica LaSelva, Roux Associates

Date: 9/29/2009

Item	Action	Value	Notes	Corrective Action Suggested
MW-1 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-1 <sup>a</sup>	Ground-Water Elevation (ft MSL)	391.8		None
MW-2 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-2 <sup>a</sup>	Ground-Water Elevation (ft MSL)	389.2		None
MW-5 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-5 <sup>a</sup>	Ground-Water Elevation (ft MSL)	385.4		None
MW-6 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-6 <sup>a</sup>	Ground-Water Elevation (ft MSL)	409.7		None
MW-8 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	0.021	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-8 <sup>a</sup>	Ground-Water Elevation (ft MSL)	386.9		None
MW-10 <sup>a</sup>	Ground-Water Sample for Lead (mg/l)	< 0.005	TOGS 1.1.1 Standard = 0.025 mg/l	None
MW-10 <sup>a</sup>	Ground-Water Elevation (ft MSL)	378.6		None
GV-1 <sup>c</sup>	Inspect for Damage	NA		None
GV-2 <sup>c</sup>	Inspect for Damage	NA		None
GV-3 <sup>c</sup>	Inspect for Damage	NA		None
GV-4 <sup>c</sup>	Inspect for Damage	NA		None
GV-5 <sup>c</sup>	Inspect for Damage	NA		None
GV-6 <sup>c</sup>	Inspect for Damage	NA		None
GV-7 <sup>c</sup>	Inspect for Damage	NA		None
SW-1 <sup>b</sup>	SW Sample for Lead at Swales (mg/l)	NA	TOGS 1.1.1 Standard = 0.050 mg/l	None
SW-2 <sup>b</sup>	SW Sample for Lead at Northern Discharge (mg/l)	0.017	TOGS 1.1.1 Standard = 0.050 mg/l	None
Eastern Portion of Site <sup>d</sup>	Inspect Vegetation	NA		Mowed in Sept. 2009
Eastern Portion of Site <sup>d</sup>	Mow Grass	NA		Mowed in Sept. 2009
Cap Surface <sup>d</sup>	Inspect Vegetation	NA		Mowed in Sept. 2009
Cap Surface <sup>d</sup>	Mow Grass	NA		Mowed in Sept. 2009

Inspector: Andrew Simmons, Paradigm Environmental / Monica LaSelva, Roux Associates

Date: 9/29/2009

Item	Action	Value	Notes	Corrective Action Suggested
Northern Wetland <sup>e</sup>	Inspect Vegetation	NA		None
Swales <sup>f</sup>	Inspect for Erosion	NA		Trimmed in Sept. 2009
Fence <sup>f</sup>	Inspect for Damage	NA		None (Repairs conducted March 2009)
Signs on SC Fence <sup>f</sup>	Inspect for Damage	NA		Trimmed in Sept. 2009
Signs on GM Fence <sup>f</sup>	Inspect for Damage	NA		Trimmed in Sept. 2009
Access Road <sup>f</sup>	Inspect for Wear and Erosion	NA		Mowed in Sept. 2009
Drop Chute <sup>f</sup>	Inspect for Blockage	NA		None
Energy Dissipation Structures <sup>f</sup>	Inspect for Damage	NA		Trimmed in Sept. 2009
Sitewide <sup>f</sup>	Inspect for Major Erosion Problems	NA		None
Sitewide <sup>f</sup>	Inspect for Significant Differential Settlement	NA		None

MW = Ground-Water Monitoring Well

SW = Surface Water

#### Notes and Assumptions

#### <sup>a</sup> Ground-Water Sampling

- 1. Ground-water sampling to be performed quarterly for years 1 and 2.
- 2. Ground-water sampling to be performed semi-annually for years 3 through 7.
- 3. Ground-water sampling to be performed annually for years 8 through 30.
- 4. NYSDEC will grant reduction of ground-water sampling, Part 360 requires quarterly sampling for minimum of 5 3<sup>d</sup> Landfill Mowing and Repairs

#### <sup>c</sup> Surface-Water Sampling

- 1. Surface-water sampling to be performed quarterly for years 1 and 2.
- 2. Surface-water sampling to be performed semi-annually for years 3 through 4.
- 3. Surface-water sampling to be performed annually in year 5 through 7.
- 4. No surface-water sampling will be performed after year 7.

## GV = Permanent Landfill Gas Vent

NA = Not Analyzed

SC = Syracuse China GM = General Motors Corporation

#### <sup>b</sup> Landfill Gas Monitoring

- 1. Landfill gas monitoring to be performed annually for years 1 through 4.
- 2. No landfill gas monitoring will be performed after year 4.

1. Landfill mowing to be performed annually for years 1 through 30.

#### <sup>e</sup> Wetlands Monitoring Activities

1. Wetlands vegetation inspection is for erosion only and is not part of the USACE-required activities.

5. NYSDEC will grant reduction of surface-water sampling, Part 360 requires quarterly sampling for minimum of 5. "Annual Landfill Inspection and Reporting

1. One inspection to be performed annually for years 1 through 30.

# **APPENDIX B**

# PARADIGM ENVIRONMENTAL SERVICES, INC. ANALYTICAL REPORT



# Analytical Report Cover Page

# Roux Associates

# For Lab Project # 09-0971 Issued March 25, 2009 This report contains a total of 5 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.

179 Lake Avenue · Rochester, NY 14608 · (585) 647-2530 · Fax (585) 647-3311 · ELAP ID# 10958



ENVIRONMENTAL SERVICES, INC.

Roux Associates Syracuse China Facility 2900 Court Street Syracuse, NY 13208 Lab Project # 09-0971

#### Syracuse China Groundwater Monitoring, 3/18/09

Andrew Simmons, representing Paradigm Environmental, arrived on site at 08:30, 3/18/09, and obtained the gate key from Paula DiStefano. Andrew spoke with Paula regarding future access to the landfill and the factory property; he was told a key would be issued to Paradigm that would open both gates.

Well MW-6 behind the factory appears to have been struck with a plow over the winter and has caused a kink in the inner well casing making it difficult to obtain a sample. Well MW-5 had what appeared to be orange/red algae in the purge water. Wells MW-1, 2, 8, 10 were samples in good order, with nothing notable to report.

All the locks on the wells need to be lubricated, as the locks are sticking and very hard to open.

Three (3) volumes of water were purged from all the wells then allowed to recharge and stabilize prior to the samples being taken. Andrew locked and checked the gate on Factory Avenue and returned the gate key to Bob B. from maintenance representing Syracuse China at 13:20.



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

Client: Roux Associates

N/A

ENVIRONMENTAL SERVICES, INC.

Client Job Site: Syracuse China

Client Job No.:

 Lab Project No.:
 09-0971

 Sample Type:
 Water

 Method:
 EPA 200.7

 Date(s) Sampled:
 03/18/2009

 Date Received:
 03/19/2009

 Date Analyzed:
 03/25/2009

Laboratory Report for Metals Analysis in Water

Lab Sample No.	Field ID No.	Field Location	Lead Results (mg/L)
3515	N/A	MW-1	<0.005
3516	N/A	MW-2	<0.005
3517	N/A	MW-5	<0.005
3518	N/A	MW-6	<0.005
3519	N/A	MW-8	<0.005
3520	N/A	MW-10	<0.005

ELAP ID No.: 10958

Comments:

Magni Approved By: Bruce Hoogesteger, Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional sample information, including compliance with sample condition requirements upon receipt. File ID:090971.XLS

Location ID	Date	Time of Sample	Conductivity (mS/cm)	Dissolved Oxygen (PPM)	рН	Temp (°C)	Turbidity (NTU's)	Depth to Water (ft)	Depth To Bottom (ft)	Vol Purged	Time of Purge
Well # 1	03/18/09	13:08	0.74	11.44	6.2	10.9	47.6	14.0		44.0	
Well # 2	03/18/09	12:54	1.28	11.86	6.2	9.9	47.0	5.3	25.3	11.0	10:50
Well # 5	03/18/09	13:19	1.43	11.04	6.3	12.0	111.0	3.0	13.3	8.0	10:10
Well # 6	03/18/09	14:04	0.88	12.10	6.2	9.1	75.4	5.0	<u>13.4</u> 17.0	10.5	11:25
Well # 8	03/18/09	13:42	3.00	11.81	6.2	9.2	33.1	3.7	23.0	12.0	9:26
Well # 10	03/18/09	13:34	2.91	13.28	6.1	7.8	99,9	3.0	17.0	23.0	12:37
SW-1						1	33.3	5.0	17.0	9.0	11:49
SW-2					,					·	<b> _</b>

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# Syracuse China Landfill Monitoring

\* Conductivity, pH, dissolved oxygen, temperature and turbidity readings performed using Horiba model # U-22 monitor, serial # 611012. \*\* Calibration certificate # P994435, Ashtead Technology, for 3/18/09 readings.

PARA	PARADIGM				CH	CHAIN OF CUSTODY	Ydotsi				1 · · ·
ENVIRO	ENVIRONMENTAL			REPORT TO:			INVOICE TO				
SERVICES, INC.	ES, INC.	COMPANY		Roux Associates		COMPANY:			LAB PROJECT #: CLIE	CLIENT PROJECT #:	
179 Lake Avenue	e	ADDRESS:	ESS:	1222 Forest Parkway,	Suite 190	ADDRESS:			17 90-90		
Rochester, NY 14608	14608	CITY:	West Deptford	STATE:	NJ ZIP: 08066	CITY:	S	STATE: ZIP:	TURNAROUND TIME: (WORKING DAYS)	NG DAYS)	Q
(585) 647-2530 * (800) 724-1997	(800) 724-1997	PHONE:	(856)423-8800	FAX:	(856)423-3220	PHONE:	FAX:		- <b>-</b>		*
PROJECT NAME/SITE NAME:	E NAME:	ATTNE	Monica Laselva	Laselva		ATTN:					
Syracuse China	ina	COMMENTS:	ENTS:							~ ~	
						REQU	REQUESTED ANALYSIS	KSIS			
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DATE		со»-⊦ ∝<¤	<b>~</b> ;	SAMPLE LOCATION/FIELD ID	< h~ & ×	- 4 2 W			REMARKS	PARADIGM LAB SAMPLE NUMBER	
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3 3/18	1319	×	MW-5		M	1 X					
4 5/18	1404	×	MW-6		Ŵ	1 X					
5 5/18	1342	×	MW-8		w	1 X				) (r	
6 3/18	1334	×	MW-10		M	1 X				2 S	
7											
8							 				
6				9 - 499							
10 **1 AD LICE ON! X7**	**// 11/							······			
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SAMPLE CONDITION: Check box If acceptable or note deviation:	FION: Check bo note deviation:	×	CONTAINER TYPE:	$\overline{\mathbf{X}}$	RESERVATIONS:	N T	HOLDING TIME:	TEN	TEMPERATURE:		2
									11°Cicedon 3/18- Pres. 48940	118- Pres. A.E.	2950
Sampled By:		Nicks		Date/Time: 17.54	Relinquished By:			Date/Time:	me: Total Cost:	ost:	T
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# Analytical Report Cover Page

# <u>Roux Associates</u>

For Lab Project # 09-3546 Issued October 6, 2009 This report contains a total of 5 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.







179 Lake Avenue, Rochester, NY 14608 PHONE: 585-647-2530 TOLL FREE: 800-724-1997 FAX: 585-647-3311

Roux Associates Syracuse China Facility 2900 Court Street Syracuse, NY 13208 Lab Project # 09-3546

## Syracuse China Groundwater Monitoring, 9/29/09

Andrew Simmons, representing Paradigm Environmental, arrived on site at 08:50, 9/29/09, met with Monica Laselva representing Roux Associates to gain access to the landfill.

Syracuse China security at 2900 Court Street opened up the loading dock gate allowing access to Well MW-6 behind the factory.

Well MW-6 behind the factory appears to have been struck with a plow over the winter and has caused a kink in the inner well casing making it difficult to obtain a sample. Well MW-8 on the side of the landfill appears to have been struck by a tractor and has cause a kink in the inner well casing making it difficult to obtain a sample. Wells MW-1, 2, 5, 10 were samples in good order, with nothing notable to report. Surface water samples were collected from SW-1 and SW-2 both locations have become overgrown with vegetation and a depth of water was not obtainable.

All the locks on the wells need to be lubricated, as the locks are sticking and very hard to open.

Three (3) volumes of water were purged from all the wells then allowed to recharge and stabilize prior to the samples being taken. Andrew locked all the wells and the gate leading from the landfill to the railroad tracks.

# Syracuse China Landfill Monitoring

				Dissolved					Depth To	
			Conductivity	Oxygen			Turbidity	Depth to	Bottom	Vol
Location ID	Date	Time	(mS/cm)	(PPM)	pН	Temp (°C)	(NTU's)	Water (ft)	(ft)	Purged
Well#1	09/29/09	11:55	1.06	9.77	7.4	12.9	68.4	22.0	25.3	4.0
Well#2	09/29/09	13:10	1.43	8.24	6.7	15.8	4.0	5.6	13.3	4.4
Well # 5	09/29/09	12:10	1.49	7.62	6.8	12.8	24.8	5.0	13.4	5.0
Well # 6	09/29/09	14:36	0.82	9.85	6.9	16.2	45.5	5.0	17.0	6.0
Well # 8	09/29/09	12:40	2.91	8.62	6.6	13.7	24.8			8.0
Well # 10	09/29/09	12:25	2.70	11.21	6.8	14.5	42.4	4.0	17.0	6.0
SW-1	09/29/09	12:33	0.88	11.53	7.2	14.0	5.0	N/A	N/A	
SW-2	09/29/09	12:54	1.50	13.21	6.7	14.8	6.6	N/A	N/A	

\* Conductivity, pH, dissolved oxygen, and temperature readings performed using YSI model # 600QS monitor, serial # 04D6267. Calibration certificate # 73935 \*\* Turbidity readings performed using LaMotte 2020E meter, serial # Me-10142. Calibration certificate # 73936

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179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

# LAB REPORT FOR METALS ANALYSIS IN WATER

Client:	Roux Associates	Lab Project No.:	09-3546
Client Job Site:	Syracuse China	Sample Type: Method:	Water EPA 200.7
Client Job No.:	N/A	1.10011011	GI II 200.7
		Date Sampled:	09/29/2009
		Date Received:	09/30/2009
		Date Analyzed:	10/05/2009

Lab Sample No.	Field ID No.	Field Location	Lead Results (mg/L)							
10941	N/A	MW-1	<0.005							
10942	N/A	MW-2	<0.005							
10943	N/A	MW-5	<0.005							
10944	N/A	MW-6	<0.005							
10945	N/A	MW-8	0.021							
10946	N/A	MW-10	<0.005							
10947	N/A	SW-1	<0.005							
10948	N/A	SW-2	0.017 D							

ELAP ID No.:10958

Comments:

Approved By:

Bruce Hoogesteger, Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt.

# PARADIGM

# CHAIN OF CUSTODY

ENVIRO				REPORT TO:		an a			INVOI	CE TO:									
SERVICES, INC. 179 Lake Avenue			ADDRESS: 1222 Forest Parkway,Suite 190			COMPA	۹Y:			LAB PROJECT #: CLIENT PROJECT #:									
						ADDRESS:								09-3546					
Rochester, NY 14608					CITY: STATE: ZIP:							TURNAROUND TIME: (WORKING DAYS)							
(585) 647-2530 * (800) 724-1997		PHONE: (856)423-8800 FAX: (856)423-3220				PHONE: FAX:									STI	'n	0	TUED	
PROJECT NAME/SITE NAME:			ATTN: Monica Laselva				ATTN:								П.	STD OTHER			
Syracuse Ch	ina	-	COMMEN	NTS:	· · · · · · · · · · · · · · · · · · ·	<u> </u>							<u> </u>	<u> </u>		<u> </u>	<u>1</u> -		
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DATE	TIME	C O M P O S I T E	G R A B	SAMPLE LOCATION/FIELD ID	M A T R I X	C ON TAINER R N U A INER R R S	P0			ANALYS			REM		PARADIGM LAB SAMPLE NUMBER				
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39/19/19	1210		х	MW-5	w	1	x				╉╾╂					+	1 1-		
49/29/09	1436			MW-6	w	1	x	+	╉		╋╍┼					+/	1		
59/29/09	1240			MW-8	w	1	x				┥──┼				·			74	
69/25/39	1225			MW-10	w	1	x	+	┼╌┼		┼─┼			· · · · ·		1/	tt	74	
79/29/09	1233			SW-1	w	1		+			┥─┤								16
8 9/29/07	1254			SW-2		1	X V	┥			┼╾┼							94	
9	1231				W		x				┿				*		0	74	18
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**LAB USE (	ONLY**																		
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Sampled By:			Date/Time: Relinquished B 9/29/55 //55				y: Date/T							15°C iced - NIA blc for metals on Time: Total Cost:					
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# **APPENDIX C**

# **PHOTOGRAPHIC DOCUMENTATION**



Photograph 1: View of landfill looking west.



Photograph 2: View of swale looking west



Photograph 3: View of landfill looking northwest.



**Photograph 4:** View of landfill looking east.



Photograph 5: View of swale looking north.



Photograph 6: View of swale looking west.



Photograph 7: View of eastern area looking southeast.



Photograph 8: View of access road looking north.