

Engineering Department



LOCKPORT MUNICIPAL BUILDING
ONE LOCKS PLAZA
LOCKPORT, N.Y. 14094
Phone (716) 439-6758
Fax (716) 439-6605

To:

Brian Sadowski
New York State Department of Environmental Conservation
Division of Environmental Remediation] Region 9 Michigan Ave Buffalo, NY 14203-2999

Date: January 17, 2013
Job No.
Re: DEC Site No 932010
From: Norman Allen

Enclosed Are:

Number of Copies	Drawing Number	Description
1		Landfill PRR revised 1/17/13

Please take action as indicated below:

_____ Note and File

_____ Note and Return to Me

_____ Return with more Details

☒ For your Approval

_____ Approved

_____ Investigate

_____ Please Reply Promptly

_____ Take Appropriate Action

_____ Per your Request

_____ For your Signature

_____ For your Information

_____ Other _____

Lockport City Landfill

NYS DEC Site No. 932010

Periodic Review Report (PRR)

Submitted January 15, 2013

(Revised 1/17/13)

By

Norman D. Allen

Director of Engineering / Public Works

City of Lockport Engineering Department

Introduction

The Lockport City Landfill is a 30 acre site that was used to dispose municipal as well as industrial waste. From the early 1950s until 1976 it received sewage sludge, wood starch contaminated with peroxide waste, keto and oxylite waste, steel barrels, plastics, glass, cardboard and waste paper. This report will measure the success the City of Lockport has experienced in meeting the goals and objectives as listed in the Record of Decision prepared by the NYS DEC dated November 1992.

Site Overview

The Lockport City Landfill is actually two fill sites separated by the Somerset Railroad. Located at the western end of Oakhurst Street, it is bordered by the Gulf (a Class D stream) to the west and north, by Sutliff Rotary Park and Railroad Street on the east and by the City Highway Garage on the South. Site topography is irregular, with the eastern and southern portion relatively flat, the western portion having a steep slope down to the Gulf and the northern portion sloping gradually downward to a 3 acre wetland. A 36 inch concrete pipe, installed to drain a spring near Oakhurst Street has an outfall near the Gulf in the southwestern portion of the site. An 18inch sanitary sewer runs adjacent to the landfill in the Gulf. Please refer to figure one for reference. Following is the Administrative Record:

- Phase 1 Summary Report, prepared by Recra Research, November 1983
- Phase 11 Investigation, prepared by Recra Research, August 1985
- Consent Order between NYS and the City of Lockport, executed on May 15, 1989
- State Assistance Contract between NYS and the City of Lockport, executed in December 1989
- Citizen Participation Plan, October 1989
- Remedial Investigation/Feasibility Study (RI/FS) Work plans, prepared by URS Consultants, November 1989
- Project Management Work Plan, prepared by URS Consultants, January 1990
- Scope of Work for the Second Phase RI, prepared by URS Consultants, January 1991
- Remedial Investigation Report, prepared by URS Consultants, April 1992
- Feasibility Study Report, prepared by URS Consultants, July 1992
- Lockport City Landfill RI/FS Correspondence File
- Detailed Analysis of Remedial Alternatives, prepared by NYSDEC, July 1992
- Responsiveness Summary to Comments Received During Public Comment Period, prepared by NYSDEC, November 1992
- Lockport City Landfill, Record of Decision, prepared by NYS DEC, November 1992
- Remedial Action Design, O & M and Contingency Plan prepared by URS Consultants, March 1994
- Remedial Action Design, Long Term Monitoring Program prepared by URS Consultants, March 1994
- Construction Monitoring Report, prepared by URS Consultants, November 1995

Selected Remediation

As stated in the Record of Decision the following remedy was implemented:

- Installation of a Part 360 cap over all areas of fill except the steep embankment. It included a gas venting layer, a low permeability layer, a barrier protection layer and a topsoil layer.

- The waste along the steep embankment at the western edge of the site was excavated and placed under the cap.
- A long term monitoring program to evaluate the effectiveness of the remedial program.
- Regular inspection/repair of the cap to insure that the integrity is maintained.
- Yearly ground water sampling by an environmental consultant and lab analysis by a certified by a NYSDOH Environmental Laboratory Approval Program laboratory. The 2011 Sampling and Analysis Plan dated November 2012 performed by GHD Consulting Services is on file at the City of Lockport's Engineering Department and has been approved by the NYSDEC Buffalo office.
- Deed restrictions on future land use.

Goals of the Remediation

- Prevent direct contact with on-site contaminated soil/fill.
- Reduce erosion of on-site contaminated soil/fill into the Gulf Creek.
- Reduce infiltration through the landfill; this will in term reduce migration of contaminants in the groundwater and surface water.

Remedy Performance, Effectiveness and Protectiveness

Below are the Analytical Results of ground water sampling reproduced from the Sampling and Analysis Plans prepared by URS Consultants and GHD Consulting Engineers:

Monitoring Well MW-3S

Volatile Compounds	Units	Action Level	6/97	11/97	9/98	9/99	9/00	9/01	10/02	12/03	10/04	10/05	10/06	10/07	10/08	12/09	10/10
1	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	4 J	3 J	2 J	4J
3	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
4	UG/L	NS	U	U	U	U	U	U	U	U	U	1 J	U	U	U	U	3J
5	UG/L	NS	U	U	U	U	U	U	U	U	U	U	6 J	U	U	U	U

Volatile Compounds	Units	Action Level	10/11	10/12													
1	UG/L	NS	U	U													
2	UG/L	NS	3.2J	U													
3	UG/L	NS	U	U													
4	UG/L	NS	2.8J	U													
5	UG/L	NS	U	U													

Notes: VOC analysis by USEPA CLP SOW OLM04.2
 Volatile Compound key 1 = Vinyl Chloride, 2 = 1,2-Dichloroethene (total), 3 = Trichloroethene, 4 = 1,1-Dichloroethane,
 5 = Acetone
 U = not detected above the quantitation limit J = estimated concentration NS = no standard

Monitoring Well MW-6D

Volatile Compounds	Units	Action Level	6/97	11/97	9/98	9/99	9/00	9/01	10/02	12/03	10/04	10/05	10/06	10/07	10/08	12/09	10/10
1	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-
2	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-
3	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-
4	UG/L	NS	U	U	U	U	U	U	U	U	U	2 J	16	-	-	-	-
5	UG/L	NS	U	U	U	U	U	U	U	U	U	U	1 J	-	-	-	-
6	UG/L	NS	U	U	U	U	U	U	U	U	U	2 J	2 J	-	-	-	-
7	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-

Volatile Compounds	Units	Action Level	10/11	10/12													
1	UG/L	NS	-	-													
2	UG/L	NS	-	-													
3	UG/L	NS	-	-													
4	UG/L	NS	-	-													
5	UG/L	NS	-	-													
6	UG/L	NS	-	-													
7	UG/L	NS	-	-													

Notes: VOC analysis by USEPA CLP SOW OLM04.2
 Volatile Compound key 1 = Vinyl Chloride, 2 = 1,2-Dichloroethene (total), 3 = Trichloroethene, 4 = Acetone,
 5 = 2- Butanone, 6 = Toluene, 7 = Xylene (total)
 U = not detected above the quantitation limit J = estimated concentration NS = no standard
 October 2007, October 2008, October 2009, October 2010 & October 2011 not sampled due to dry conditions, no groundwater available

Monitoring Well MW-8D

Volatile Compounds	Units	Action Level	6/97	11/97	9/98	9/99	9/00	9/01	10/02	12/03	10/04	10/05	10/06	10/07	10/08	12/09	10/10
1	UG/L	162	U	U	U	U	U	7	33	6	4 J	U	U	U	U	U	U
2	UG/L	1580	100	90	110	18	25	41	120	7	28	27 J	40	32	34	26	23
3	UG/L	260	2.4	4	5	2	2	2	U	U	U	U	1 J	1 J	U	U	U

Volatile Compounds	Units	Action Level	10/11	10/12													
1	UG/L	162	U	11													
2	UG/L	1580	24	65													
3	UG/L	260	3.2J	U													

Notes: VOC analysis by USEPA CLP SOW OLM04.2
 Volatile Compound key 1 = Vinyl Chloride, 2 = 1,2-Dichloroethene (total), 3 = Trichloroethene,
 U = not detected above the quantitation limit J = estimated concentration NS = no standard

Monitoring Well MW-9S

Volatile Compounds	Units	Action Level	6/97	11/97	9/98	9/99	9/00	9/01	10/02	12/03	10/04	10/05	10/06	10/07	10/08	12/09	10/10
1	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
3	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Volatile Compounds	Units	Action Level	10/11	10/12													
1	UG/L	NS	U	U													
2	UG/L	NS	U	U													
3	UG/L	NS	U	U													

Notes: VOC analysis by USEPA CLP SOW OLM04.2
Volatile Compound key 1 = Vinyl Chloride, 2 = 1,2-Dichloroethene (total), 3 = Trichloroethene,
U = not detected above the quantitation limit J = estimated concentration NS = no standard

Monitoring Well MW-9I

Volatile Compounds	Units	Action Level	6/97	11/97	9/98	9/99	9/00	9/01	10/02	12/03	10/04	10/05	10/06	10/07	10/08	12/09	10/10
1	UG/L	24	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2	UG/L	42	8.4	6	6	5	4 J	4 J	4 J	4 J	3 J	3 J	2 J	3 J	2 J	U	2J
3	UG/L	NS	1.6	2	2	1 J	1 J	1 J	1 J	U	U	U	U	U	U	U	U

Volatile Compounds	Units	Action Level	10/11	10/12													
1	UG/L	24	U	U													
2	UG/L	42	U	U													
3	UG/L	NS	U	U													

Notes: VOC analysis by USEPA CLP SOW OLM04.2
Volatile Compound key 1 = Vinyl Chloride, 2 = 1,2-Dichloroethene (total), 3 = Trichloroethene,
U = not detected above the quantitation limit J = estimated concentration NS = no standard

Outfall L-2

Volatile Compounds	Units	Action Level	6/97	11/97	9/98	9/99	9/00	9/01	10/02	12/03	10/04	10/05	10/06	10/07	10/08	12/09	10/10
1	UG/L	94	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2	UG/L	280	U	2	U	U	U	U	U	U	U	U	U	U	U	U	U
3	UG/L	NS	U	3	U	U	U	U	U	U	U	U	U	U	U	U	U
4	UG/L	NS	U	U	U	U	U	U	U	U	U	2 J	U	U	U	U	U
5	UG/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Volatile Compounds	Units	Action Level	10/11	10/12													
1	UG/L	94	U	U													
2	UG/L	280	U	U													
3	UG/L	NS	U	U													
4	UG/L	NS	U	U													
5	UG/L	NS	U	U													

Notes: VOC analysis by USEPA CLP SOW OLM04.2
Volatile Compound key 1 = Vinyl Chloride, 2 = 1,2-Dichloroethene (total), 3 = Trichloroethene, 4 = Acetone,
5 = Chlorobenzene
U = not detected above the quantitation limit J = estimated concentration NS = no standard

In addition to the yearly sampling a visual inspection of the cap has taken place in the spring and fall of each year. The City of Lockport's Engineering Department performs the spring inspection and the fall inspection is hired out to a consultant who also performs the water sampling at the same time. URS Consultants performed the work the first ten years and GHD Consulting Services (formerly known as Stearns & Wheeler) are currently under contract for years sixteen through twenty.

Since construction of the cap there have been no significant failures or releases of contamination to the environment. The City of Lockport has continually reacted to and repaired all minor defects or acts of vandalism. They usually range from damage to the vent pipes from mowing operations to minor sloughing off of the cap near the edge of the steep embankment. Tree saplings are removed each year as well as mowing and the application of an environmentally approved herbicide to control vegetation. A record of all inspections and corrective measures is kept on file at the City's Engineering Department.

Recommendations

In summary all goals of the remedy are being met and no change to the inspections, monitoring or reporting should be implemented.



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Box 1

Site No. 932010

Site Name Lockport City Landfill

Site Address: Oakhurst Road Zip Code: 14094
City/Town: Lockport
County: Niagara
Site Acreage: 23.4

Reporting Period: January 15, 2012 to January 15, 2013

- | | YES | NO |
|---|-------------------------------------|-------------------------------------|
| 1. Is the information above correct? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| If NO, include handwritten above or on a separate sheet. | | |
| 2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form. | | |
| 5. Is the site currently undergoing development? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Box 2

- | | YES | NO |
|--|-------------------------------------|--------------------------|
| 6. Is the current site use consistent with the use(s) listed below?
Closed Landfill | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Are all ICs/ECs in place and functioning as designed? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Norm D. All
Signature of Owner, Remedial Party or Designated Representative

1/14/13
Date

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
108.00-1-14	City of Lockport	
108.15-1-1	City of Lockport	Landuse Restriction Monitoring Plan O&M Plan
		Landuse Restriction Monitoring Plan O&M Plan

Box 4

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
108.00-1-14	Cover System Fencing/Access Control
108.15-1-1	Cover System Fencing/Access Control

Control Description for Site No. 932010

Parcel: 108.00-1-14

In accordance with the December 1992 Record of Decision (ROD) and the Declaration of Covenants and Restrictions filed with the Niagara County Clerk's Office on February 3, 2010, the following controls are in place at the site and must be certified periodically: (1) a Part 360 type clay cap to eliminate direct contact and reduce the amount of leachate being generated; (2) a long-term monitoring program to evaluate the effectiveness of the remedial action by sampling groundwater and leachate; and (3) an operation and maintenance program that includes regular cap inspection and repair.

Parcel: 108.15-1-1

In accordance with the December 1992 Record of Decision (ROD) and the Declaration of Covenants and Restrictions filed with the Niagara County Clerk's Office on February 3, 2010, the following controls are in place at the site and must be certified periodically: (1) a Part 360 type clay cap to eliminate direct contact and reduce the amount of leachate being generated; (2) a long-term monitoring program to evaluate the effectiveness of the remedial action by sampling groundwater and leachate; and (3) an operation and maintenance program that includes regular cap inspection and repair.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒ ☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.



Signature of Owner, Remedial Party or Designated Representative

1/14/13

Date

IC CERTIFICATIONS
SITE NO. 932010

Box 6


SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Norman D. Allen at One Locks Plaza, Lockport, NY 14094
print name print business address

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.


Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

1/14/13
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Norman D. Allen at One Lakes Plaza Lockport, NY 14094
print name print business address

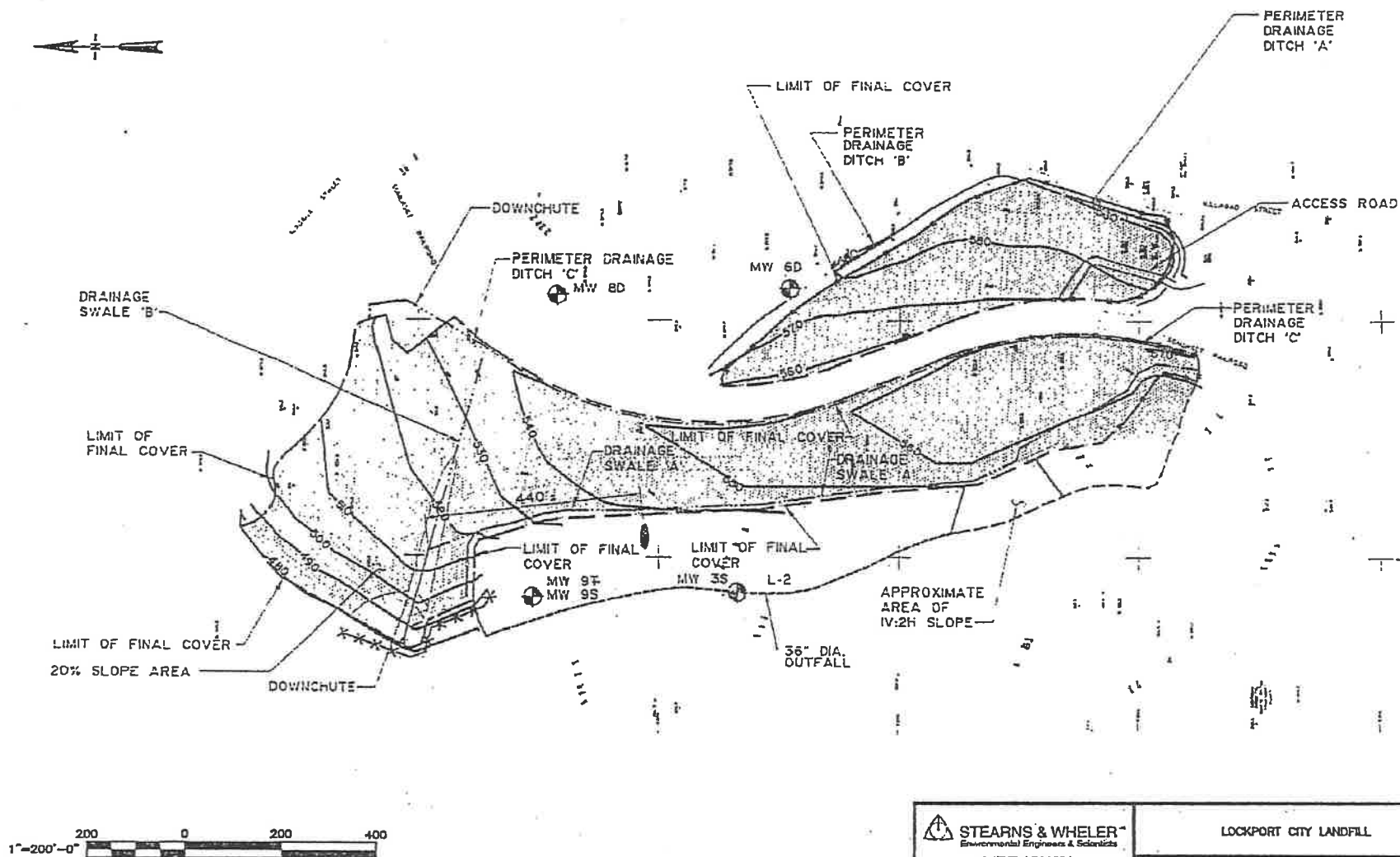
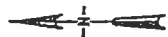
am certifying as a Qualified Environmental Professional for the City of Lockport, Owner
(Owner or Remedial Party)

N. D. Allen

Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

1/14/13
Date



STEARNS & WHEELER
Environmental Engineers & Scientists
ALBANY, NEW YORK
DATE: 12/09 JOB No.: 71138

LOCKPORT CITY LANDFILL

FIGURE 1
SITE PLAN