November 15, 2019

Mr. David Chiusano
New York State Department of Environmental Conservation
Division of Environmental Remediation, Bureau E, Section A
625 Broadway
Albany, New York 12233
David.Chiusano@dec.ny.gov

RE: Submission of the 2019 Periodic Review Report
South Hill Dump, Town of Cortlandville, New York
CHA Project No.: 34236
NYSDEC Site No.: 712009

Dear Mr. Chiusano,

On behalf of the Town of Cortlandville, please find a copy of the 2019 Periodic Review Report (PRR) for the South Hill Dump attached. The site was observed to be in overall good condition during the 2019 activities, with no observed erosion, scour, animal burrows or leachate. The Town mowed the landfill once in June 2019 and again in October 2019.

In an email dated January 3rd, 2019 it was recommended by the NYSDEC to reduce the groundwater sampling frequency from once every 15 months to once every 24 months. CHA requested this modification in the 2018 PRR. In accordance with this modified frequency, groundwater was not sampled during 2019. Rather, site inspection and measurement of groundwater elevations were conducted twice during the calendar year.

At this time, it is recommended that the site monitoring program continue. The next groundwater/surface water/sediment monitoring event will occur in September 2020. No changes to the site-wide inspections, or operation and maintenance plans are recommended at this time.

If you have any questions, please do not hesitate to contact me at (315) 471-3920.

Sincerely,

Karyn Ehmann

Karyn Ehmann
Assistant Engineer I

KE/
cc:
Mr. Richard Jones, NYSDOH richard.jones@health.ny.gov
V:\Projects\ANY\K4\34236\Reports\2019 PRR\DRAFT\PRR Cover Letter.docx

2019 PERIODIC REVIEW REPORT

South Hill Dump
Sommerville Road
Cortlandville, New York

NYSDEC Site Number: 712009

CHA Project Number: 34236

Prepared for:

Town of Cortlandville
Raymond G. Thorpe Municipal Building
3577 Terrace Road
Cortland, New York 13045

Prepared by:

One Park Place
300 South State Street, Suite 600
Syracuse, New York 13202
Phone: (315) 471-3920
Fax: (315) 471-3569

November 13, 2019

V:\Projects\ANY\K4\34236\Reports\2019 PRR\FINAL\2019 PRR.report.hw.712009_South Hill_Dump_final.doc

This Page Left Blank Intentionally.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

LIST OF ACRONYMS & ABBREVIATIONS

CHA	CHA Consulting, Inc.
DCE	cis-1,2-Dichloroethylene
DOH	Department of Health
EC	Engineering Controls
FAR	Field Activities Report
FER	Final Engineering Report
IC	Institutional Controls
LTM	Long Term Monitoring
MACTEC	MACTEC Engineering and Consulting, P.C.
ng/L	Nanograms per Liter
NYSDEC	New York State Department of Environmental Conservation
PAH	Polyaromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PFAS	Per-and Polyfluoroalkyl Substances
PRR	Periodic Review Report
RI	Remedial Investigation
ROD	Record of Decision
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
TCE	Trichloroethene
TMP	Tax Map Parcel
TOGS	Technical & Operational Guidance Series
USEPA	Environmental Protection Agency
VOC	Volatile Organic Compound

1.0 SITE OVERVIEW

The South Hill Dump inactive hazardous waste disposal Site (Site) was remediated in accordance with the Record of Decision (ROD) dated January 2008. A detailed description of the remedial actions is discussed in Section 1.3. On December 5th, 2016, the Town of Cortlandville (Town) entered an Order on Consent (Index No. R7-20150122-34) with the New York State Department of Environmental Conservation (NYSDEC) to implement the Site Management Plan (SMP), approved by NYSDEC in November 2015. This Periodic Review Report (PRR) is the fourth monitoring year since the completion of the remedy and is required as an element of the SMP developed for the Site. This PRR documents the Site-wide inspections and groundwater elevation measurements completed in 2019.

The Site is a 10.4-acre parcel located on Sommerville Road, in the Town of Cortlandville, Cortland County, New York and is identified as Tax Map Parcel (TMP) No. 109.00-01-02.000 on the Cortland County Tax Map. The Site is bounded by South Hill Road to the north and surrounded by forested land to the west, south, and east. North of South Hill Road is primarily agricultural land. A vicinity location map of the Site is included as Figure 1. An aerial image showing the Site layout is included as Figure 2.

1.1 SITE BACKGROUND

The Site was reportedly used as a local waste disposal location by residents as early as 1949 and officially operated as a solid waste disposal facility, controlled by the Town of Cortlandville, from approximately 1960 to 1972. Industrial and municipal wastes were accepted from the Town of Cortlandville, Town of Solon, and the Village of McGraw; however, access to the Site was reportedly unrestricted during this time. Site operations included pushing the waste over the working face of the landfill with cover material spread one or more times per week; however, prior to remedial action, various types of waste could be observed protruding from the surface of the landfill.

In 1990, the NYSDEC conducted a Site-wide inspection and observed the presence of multiple drum carcasses as well as leachate seeps emanating from the landfill. During this inspection soil and leachate samples were collected, revealing the presence of chlorinated solvents and pesticides. In February 1991, the Site was assigned a Class 2 Hazardous Waste Site designation (Sites considered to be a significant threat to the public health or environment - action required) based on the results of the 1990 Site-wide inspection and laboratory analysis identified the presence of pesticides and chlorinated solvents. Based on findings from intermittent sampling events from 1991 through 1994,

a Remedial Investigation (RI) was proposed. The RI was conducted by Parsons Engineering Science, Inc, under contract by the NYSDEC. RI field activities included:

- The excavation of test pits to determine the vertical extent of solid waste, collection of subsurface soil samples, and characterization of the shallow lithology;
- The collection of samples from leachate seeps and the intermittent stream on the southeastern most region of the Site; and
- The installation of soil borings and groundwater monitoring wells to facilitate the collection of subsurface soil samples (during the boring installation) and groundwater samples following the completion of the well installations.

A feasibility study and remedial action were recommended in the RI Report due to the shallow depth to fractured bedrock at the Site, overall condition of the landfill at the time of the investigation, and analytical results confirming the presence of soil, surface water, and groundwater contamination. Following development of a feasibility study to evaluate remedial alternatives for the Site, MACTEC Engineering and Consulting, P.C. (MACTEC) conducted remedial actions at the Site in 2011 and 2012. A more detailed discussion of the Site remedial actions is provided in the SMP (MACTEC, 2015). After the remedial actions were performed, the Site was reclassified as a Class 4 Inactive Hazardous Waste Site (Site Code 712009) designation (a Site properly closed but requiring continued management) by the NYSDEC.

1.2 NATURE AND EXTENT OF CONTAMINATION

The following types of contaminants were identified on the Site during the RI and remedial actions:

- Volatile organic compounds (VOCs)
  - Trichloroethene
  - 1,2-dichloroethene
- Semi-volatile organic compounds (SVOCs)
  - Polyaromatic Hydrocarbons (PAHs)
- Polychlorinated biphenyls (PCBs)
- Heavy metals
  - Copper
  - Mercury
  - Nickel
  - Zinc
  - Cadmium

1.3 SUMMARY OF SITE REMEDY

The selected remedy for the Site included the following major components:

- Consolidation of waste from outside the proposed landfill boundary to within the landfill boundary;
- Installation of a sedimentation basin for additional erosion and sediment control;
- Grading of the landfill within the new boundary;
- Removal of bulk waste uncovered during grading and excavation of down-drain trenches;
- Installation of slope benches and down-drains;
- Installation of landfill cover system, gas vents, perimeter access road waterbars to convey water across the Site roadways, and stormwater controls; and
- Seeding and mulching of vegetated areas.

In addition to the closure of the landfill, the Site remedy required that an Environmental Easement be placed on the property to (1) require compliance with the November 2015 SMP; (2) restrict the use of groundwater as a potable water source; (3) periodically certify the Institutional Controls/Engineering Controls (IC/ECs) are in place and unchanged, which is included in this PRR; and, (4) limit the use and development of the Site to closed and capped/covered landfill only. The Environmental Easement for the Site was executed by the NYSDEC on September 30, 2013, and recorded with the Cortland County Clerk on October 11, 2013, and included in Appendix C of the SMP. A Final Engineering Report (FER) was written and submitted to the NYSDEC by MACTEC in 2014.

1.4 SITE MANAGEMENT STATUS

An annual PRR is required by NYSDEC to document status of the controls established by the SMP. This PRR was prepared by CHA Consulting, Inc. (CHA) to document the status during 2019. The SMP requirements include:

- An annual inspection of the ICs and ECs; and
- Long-term monitoring (LTM) of:
    - Groundwater;
    - Surface water; and
    - Sediment.

In the 2018 PRR, CHA requested groundwater, surface water, and sediment monitoring frequency to be reduced from once every 15 months, as written in the SMP, to once every 24 months. This was approved by the NYSDEC with concurrent approval of the 2018 PRR. Per this reduced monitoring

frequency, no groundwater, surface water, or sediment samples were collected or analyzed during 2019. The next groundwater, surface water, and sediment sampling event will occur in September 2020.

2.0 INSTITUTIONAL/ENGINEERING CONTROLS COMPLIANCE REPORT

ICs and ECs have been established to protect public health and the environment for future use of the Site. The IC/ECs are designed to:

- Prevent ingestion/direct contact with remaining contamination;
- Prevent inhalation of or exposure to contaminants volatilizing from remaining contamination;
- Prevent ingestion of groundwater with contaminant levels that exceed drinking water standards; and
- Prevent contact with or inhalation of volatiles from contaminated groundwater.

2.1 INSTITUTIONAL CONTROLS

ICs are required to implement, maintain and monitor the ECs, control disturbance of contamination to prevent future exposure, and limit the use of the Site to its current use as a capped/covered landfill. ICs must remain in place unless the Environmental Easement is amended or terminated. The ICs implemented under the SMP include:

- Compliance with the Environmental Easement;
- Operation and maintenance of the ECs as specified in Section 4.0 of the SMP;
- Inspection and certification of the ECs on a semi-annual basis (i.e. in the spring and the fall);
- Implementation of the long-term environmental monitoring as defined in Section 3.0 of the SMP;
- Protection and replacement, as necessary, of on-Site environmental monitoring devices; and
- Preparation of an annual report to regulatory agencies, as defined by the SMP.

2.2 ENGINGEERING CONTROLS

2.2.1 Landfill Cover System

The landfill cover prevents exposure to the remaining contamination at the Site. The cover consists of 18-inches of cover soil and 6-inches of vegetated topsoil for an overall cover thickness of 24-inches. In the event the landfill cover is penetrated, removed, or severely disturbed, the Excavation Plan included in Section 2.4 of the SMP, shall be followed.

The landfill cover system was inspected for the evidence of erosion, cracks, and settlement of the cover soils. CHA looked for evidence of leachate seeps and exposed or damaged geomembrane or geotextile. Vegetation was inspected for height, evidence of disturbance, and evidence of woody growth. The cover system inspection included examining the landfill for the presence of any live or dead vectors, animal droppings, and burrows.

2.2.2 Site Access Controls

Site access is controlled by a chain-link fence along South Hill Road and a locked gate at the vehicle entrance. A stone road provides access around the perimeter of the landfill boundary.

Site access controls were inspected for evidence of trespassing, such as breaks in the fence or broken locks.

2.2.3 Surface Water Drainage Conveyance Controls

The perimeter access roads include waterbars to adequately convey surface water and prevent erosion of the stone road. Stone drainage pathways on the landfill cover convey surface water to a riprap-lined drainage swale along the eastern side of the landfill and ultimately to the stormwater detention basin on the southern side of the landfill. The stormwater detention basin outlet creates an intermittent flow of water that discharges to an unnamed stream which then discharges to Hoxie Gorge Creek.

The drainage system was inspected to identify any erosion, siltation, settlement, or restriction to the flow of water in the drainage ditches and piping on top of and around the perimeter of the landfill.

2.2.4 Landfill Gas Vents

Seven passive landfill gas vents were installed to collect potential landfill gas for direct venting to the atmosphere.

Inspection of the gas venting system included checking the vents for damage or blockages and checking the cap adjacent to the vents for settlement and stressed vegetation. These gas vents reduce the potential for accumulation and migration of landfill gas in the subsurface. Stressed vegetation and bubbling of surface water could indicate a malfunction of the gas venting system that cannot readily be detected upon visual inspection of the venting system itself.

2.2.5 Groundwater Monitoring Wells

Eleven groundwater monitoring wells were installed at the site. The wells are constructed of PVC and are protected by lockable steel casings.

All monitoring well casings, covers, locks, and associated structures were visually inspected to verify they are properly secured and not damaged.

2.3 2019 IC/EC INSPECTION

In accordance with the SMP, CHA performed Site inspections on July 3rd and October 11th, 2019. The landfill inspection forms associated with each inspection are included in Appendix A.
The results of the July 3rd inspection indicate the following:

- Landfill cover was in relatively good condition and the grass had recently been mowed. There was no evidence of scour or erosion There was no evidence of vectors on the site or impacts from vectors in the cover system. No leachate seeps were observed.
- The site access controls were satisfactory. There was no evidence of trespassing.
- The surface water conveyance controls were satisfactory, and the eastern drainage swale was in good condition.
- Landfill gas vents and the vegetation surrounding the gas vents appeared to be in good condition.
- Monitoring wells were in good condition with the exception of MW-2B and MW-2D, as described below.

Lawn mowing activities appear to have damaged monitoring wells MW-2B and MW-2D. The twine holding the passive diffusion bag (aka. HydraSleeve®) sampler appears to have been cut from MW-2B. The passive diffusion bag and the rope to retrieve it have fallen to the bottom of the well. Additionally, the stick-up casing for MW-2D appears to have been significantly damaged. The steel casing and the PVC riser have been cut approximately one foot above the ground surface.

Repair of MW-2D was scheduled for October 11th, 2019. Staff from CHA oversaw the repair and conducted the second semi-annual Site inspection. Results of the October 11th inspection indicate the following:

- Landfill cover was in relatively good condition and the grass had recently been mowed. There was no evidence of scour or erosion. There was no evidence of vectors on the site or impacts from vectors in the cover system. No leachate seeps were observed.

- The site access controls were satisfactory. There was no evidence of trespassing.
- The surface water conveyance controls were satisfactory, and the eastern drainage swale was in good condition.
- Landfill gas vents and the vegetation surrounding the gas vents appeared to be in good condition.
- Monitoring wells were in good condition with the repair of MW-2D. The passive diffusion bag in MW-2B will be replaced prior to the 2020 sampling event.

2.4 IC/EC CERTIFICATION

The IC and EC Certification Forms are included in Appendix B. ECs, consisting of the soil cover system, Site access controls, surface water conveyance system, and landfill gas vents were in place and functioning properly during the reporting period. These controls have been and continue to be effective in preventing exposure of the public to remaining contaminants in soil and groundwater at the Site. The SMP is being implemented and based on this review, the remedy continues to be protective of public health and/or the environment and compliant with the decision document. At this time, it is recommended that all controls for the Site remain in place.

3.0 MONITORING PLAN COMPLIANCE REPORT

3.1 COMPONENTS OF THE MONITORING PLAN

The NYSDEC approved a reduction in the groundwater, surface water, and sediment sampling frequency from once per 15 months to once per 24 months. Per this reduced monitoring frequency, no groundwater, surface water, or sediment samples were collected or analyzed during 2019.

Components of the monitoring plan include:

Semi-Annually

- Water level measurements from the 11 groundwater monitoring wells on Site. Monitoring wells are set in clusters with screens in the shallow overburden and bedrock.

Biennially

- Groundwater sampling;
- Surface water sampling;
- Seep sampling (if observed); and
- Sediment sampling.

3.1.1 Groundwater Elevation Monitoring and Flow Direction

Groundwater water level measurements were collected from each of the 11 groundwater monitoring wells shown on Figure 2 and are presented in Table 1. Groundwater levels in most wells were generally lower when compared to the 2018 monitoring event. The groundwater flow direction for the overburden and bedrock wells are depicted on the Groundwater Potentiometric Maps included as Figures 3 and 4, respectively. Groundwater at the Site generally flows to the southeast.

4.0 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

The Site was observed to be in overall good condition at the time of the 2019 activities. Specific observations include:

- The landfill cover system was in good condition.
- The site access controls were in good condition.
- The surface water drainage system was in good condition.
- The landfill gas vents were in good condition.
- Two monitoring wells were found damaged in July 2019. MW-2D was damaged by lawn mowing activities but was repaired in October 2019. The passive diffusion bag rope appeared to have been cut at MW-2B and will be replaced prior to the 2020 sampling event. but were repaired in October 2019.
- Groundwater level measurements were slightly lower than the 2018 monitoring event, however groundwater flow direction in both shallow and overburden wells remains consistent towards the southeast.

Evaluation of Remedy Performance, Effectiveness & Protectiveness

Provided that the ICs and ECs established for the Site remain in place and are maintained, it is expected that the remedy will continue to be effective in protecting human health and the environment.

Recommendations

It is recommended that the current Site ICs and ECs remain in place, and the ECs continue to be inspected and monitored. No changes to the Site inspections, or operation and maintenance plans are recommended at this time.

TABLE

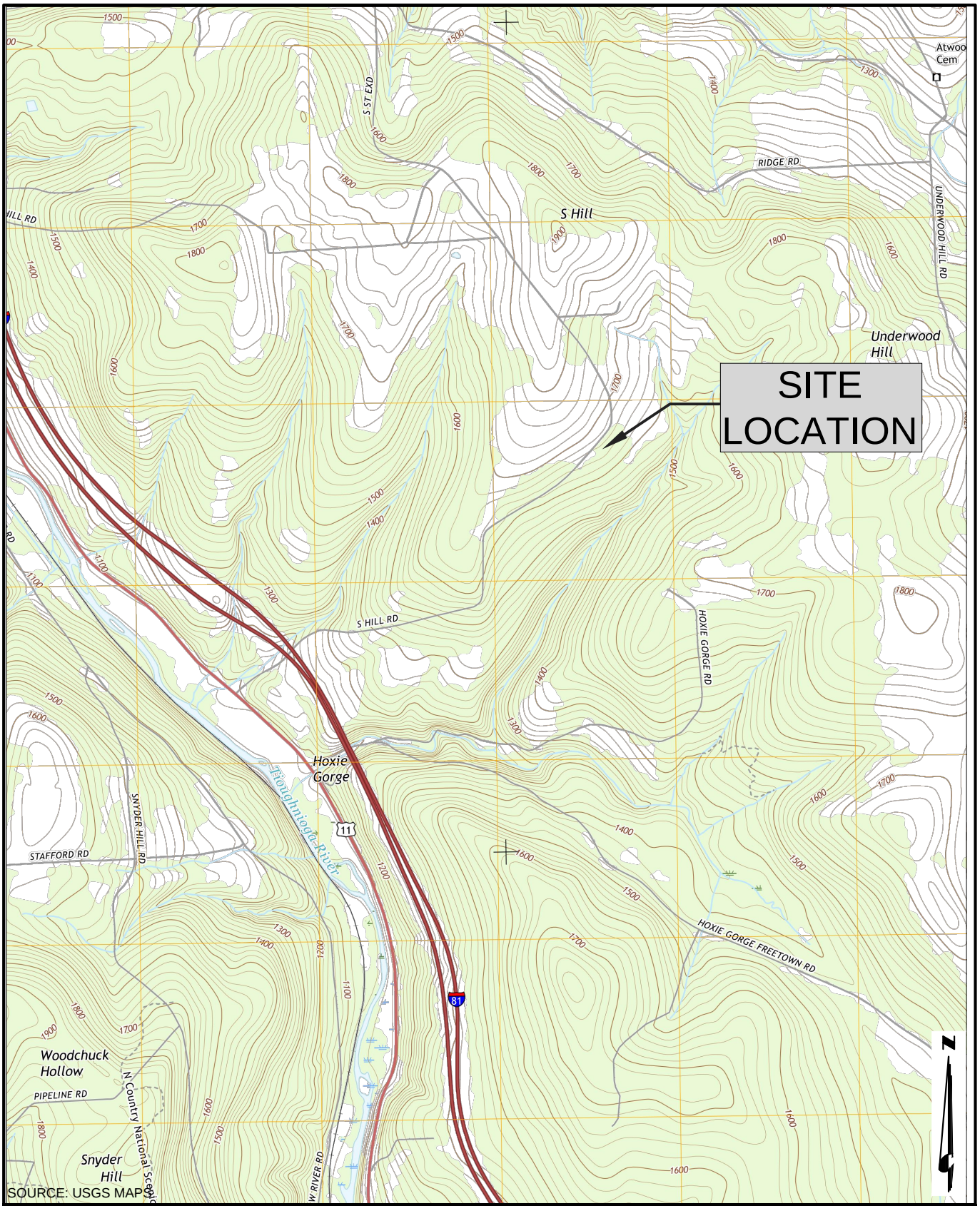
Table 1
Groundwater Elevation Data
South Hill Dump
Town of Cortlandville, New York
2019 Periodic Review Report

Well ID	Casing Elevation (ft)	Riser Elevation (ft)	Ground Elevation (ft)	Measuring Point	Total depth of well (ft)	Comments	Screen (ft, bgs)	Groundwater Elevation (ft) 2017	Groundwater Elevation (ft) 2018	Groundwater Elevation (ft) July 2019	Groundwater Elevation (ft) October 2019
MW-1S	1670.85	1670.95	1668.10	TOR	17.90	2-inch Overburden	5'-15'	1659.34	1659.06	1657.03	1655.55
MW-1B	1671.65	1671.35	1668.50	TOR	37.90	2-inch Bedrock	25'-35'	1648.40	1648.96	1648.60	1647.52
MW-2B	1574.85	No Riser	1573.40	TOC	44	3-inch Open Hole Bedrock	Open from 31.5'-41.5'	1565.18	1566.02	1562.98	1560.65
MW-2D	1576.30	1575.00	1572.00	TOR	27.00	2-inch Overburden	14'-24'	1566.64	1566.44	1565.12	1562.44
MW-2S	1575.40	1575.45	1572.60	TOR	12.90	2-inch Overburden	5'-10'	1567.83	1567.72	1567.23	1566.06
MW-3BR	1562.61	No Riser	1559.83	TOC	43.90	3-inch Open Hole Bedrock	Open from 31'-41'	1553.69	1553.57	1552.95	1551.19
MW-3SR	1563.68	1563.04	1561.35	TOR	25.30	2-inch Overburden	19'-24'	1558.71	1558.52	1558.08	1556.58
MW-3BR2	1565.25	No Riser	1565.61	TOR	24.49	4-inch Open Hole Bedrock	Open from 14'-26'	1564.71	1565.25	Not Gauged	1562.55
MW-3SR2	Flush	1565.76	1566.02	TOR	11.04	2-inch Overburden	6'-11'	1564.47	1565.36	1564.12	1562.44
MW-4B	1545.45	No Riser	1541.90	TOC	48.40	3-inch Open Hole Bedrock	Open from 36.6'-46.6'	1517.37	1517.34	1516.09	1512.00
MW-4S	1545.45	1545.40	1542.60	TOR	18.80	2-inch Overburden	6'-16'	1535.65	1535.54	1532.84	1533.66

Notes:

All casing, riser and ground elevation data taken from Field Activities Report Site Management Media Sampling and Landfill Inspection, MACTEC January 2018

FIGURES



SOURCE: USGS MAP

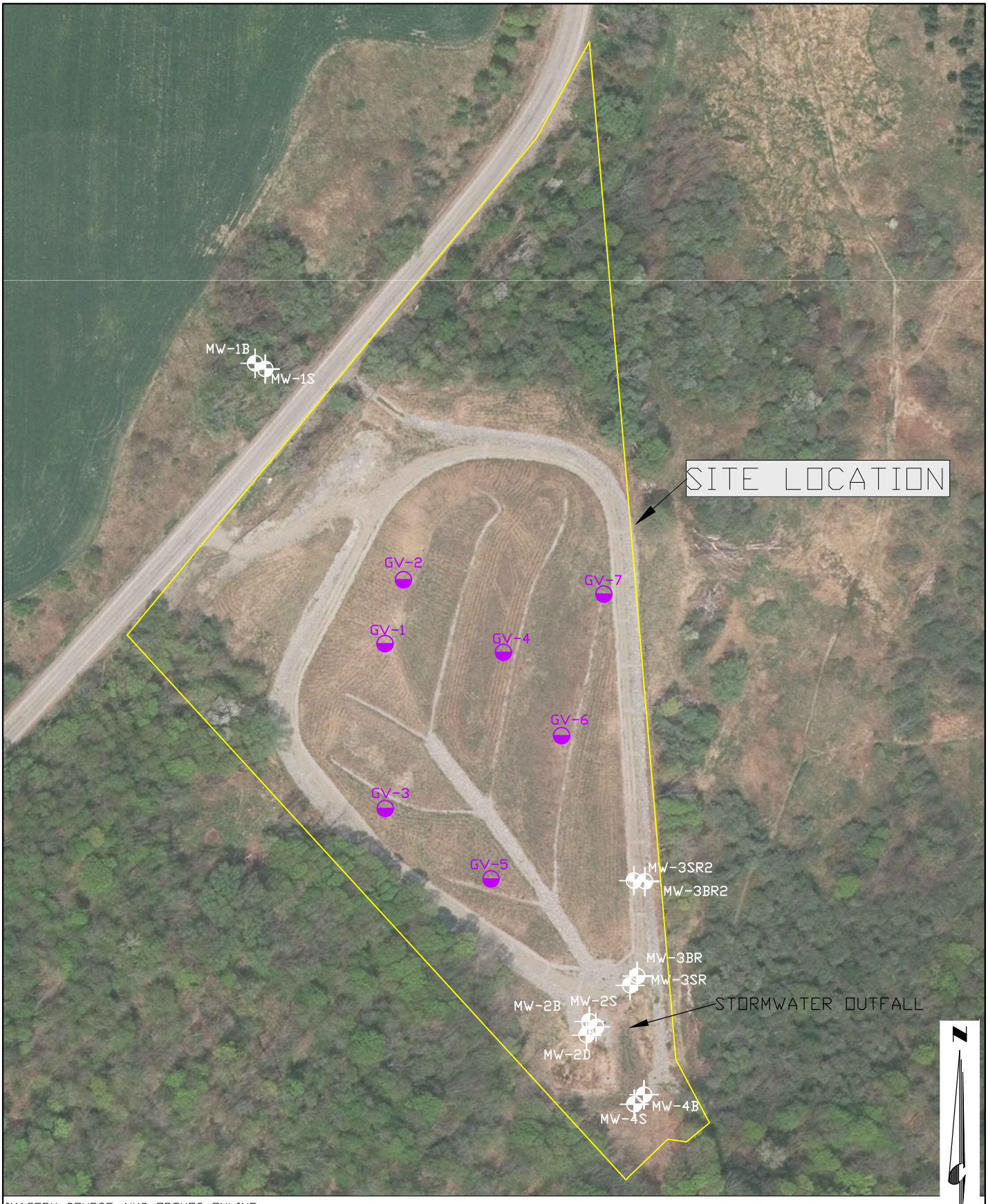
CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
PERIODIC REVIEW REPORT
SITE LOCATION MAP

PROJECT NO. 34236

DATE: 12/2019

FIGURE 1



IMAGERY SOURCE: NYS ORTHOS ONLINE

CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
PERIODIC REVIEW REPORT
SITE LAYOUT MAP

PROJECT NO. 34236

DATE: 12/2019

FIGURE 2

CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
GROUNDWATER POTENTIOMETRIC MAP
BEDROCK WELLS ONLY

PROJECT NO. 34236

DATE: 12/2019

FIGURE 4

CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
GROUNDWATER POTENTIOMETRIC MAP
BEDROCK WELLS ONLY

PROJECT NO. 34236

DATE: 12/2019

FIGURE 4

APPENDIX A

Landfill Inspection Form

SOUTH HILL DUMP
SEMI-ANNUAL POST-CLOSURE INSPECTION CHECKLIST

Report No. 003	
Page 1 of 3	
Date: 7/3/2019	Time: 14:00

Inspector:	Project No. 34236
Samantha Miller	Weather: Sunny
People Accompanying Inspector:	
Karyn Ehmann	Temp.: Hi 85°F Low 82°F

SIGNAGE AND GATE INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Is a sign posted at entrance to the landfill stating that the area is a closed landfill?	☐	☒	☐	No sign present
Is a gate present at the entrance to the landfill?	☒	☐	☐	
Is the gate locked and secured?	☒	☐	☐	

SOIL COVER SYSTEM INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Evidence of erosion of cover soils from surface of landfill (top/sideslopes)?	☐	☒	☐	
Evidence of cracks or depressions in cover soils?	☐	☒	☐	
Evidence of exposed or damaged geomembrane/clay barrier?	☐	☒	☐	

GAS VENTING SYSTEM INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Gas vent structures intact?	☒	☐	☐	
Screens on gas vents intact and unobstructed?	☒	☐	☐	
Settlement of cover system soils in area of gas vents?	☐	☒	☐	
Vapors or odors emanating from gas vents?	☐	☒	☐	
Evidence of stressed vegetation in areas around gas vents or other areas of the landfill?	☐	☒	☐	
Evidence of bubbling surface water on or in the area surrounding the landfill?	☐	☒	☐	

VEGETATIVE COVER SYSTEM INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Is vegetation well established over the entire landfill?	☒	☐	☐	
Evidence of stressed vegetation?	☐	☒	☐	
Evidence of erosion or thin vegetative cover?	☐	☒	☐	
Does the landfill need to be mowed?	☐	☒	☐	Vegetation recently mowed

SOUTH HILL DUMP
SEMI-ANNUAL POST-CLOSURE INSPECTION CHECKLIST

Report No. 003	
Page 2 of 3	
Date: 17/3/2019	Time: 14:00

ITEM/CONDITION	YES	NO	NA	COMMENTS
Evidence of exposed geotextile?	☐	☒	☐	
Presence of woody growth?	☐	☒	☐	
Evidence of ponded water?	☐	☒	☐	
Evidence of debris?	☐	☒	☐	
DRAINAGE SYSTEM INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Evidence of erosion in drainage structures?	☐	☒	☐	
Presence of siltation in drainage structures?	☐	☒	☐	
Evidence of settlement in drainage structures?	☐	☒	☐	
Evidence of restrictions of water flow in drainage ditches and structures?	☐	☒	☐	
LEACHATE INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Evidence of leachate seeps or staining around the perimeter of the landfill?	☐	☒	☐	
Evidence of leachate seeps or staining off the perimeter of the landfill?	☐	☒	☐	
Evidence of leachate seeps or staining in the drainage ditches or structures of the landfill?	☐	☒	☐	
Evidence of leachate seeps or staining on the surface of the landfill?	☐	☒	☐	
MONITORING WELL INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Are the monitoring wells in generally good condition?	☐	☒	☐	See additional notes & observations
Are well caps installed on the wells?	☒	☐	☐	
Are locks present and secured?	☒	☐	☐	
VECTOR INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Were any vectors observed?	☐	☒	☐	
Evidence of vector activity (tracks, droppings, dens, etc.)	☐	☒	☐	
Evidence of damage due to vector activity?	☐	☒	☐	
SITE ACCESS ROAD INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Are site access roads passable?	☒	☐	☐	
Presence of ruts or erosion?	☐	☒	☐	
Are site access roads in generally good condition?	☒	☐	☐	

SOUTH HILL DUMP
SEMI-ANNUAL POST-CLOSURE INSPECTION CHECKLIST

Report No. 003	
Page 3 of 3	
Date: 7/3/2019	Time: 14:00

ADDITIONAL NOTES & OBSERVATIONS

The rope attached to the passive diffusion bag (PDB) (aka Hydrosleeve) in MW-2B appears to have been cut by the lawn mowing equipment. The rope has fallen down the well riser and was not able to be recovered during the inspection. The well identification tag was caught between the casing and the well cap.

MW-2D appears to have been struck by the lawn mowing equipment.

The casing associated with MW-2D has been damaged and the PVC riser has been clean cut. The riser is now approximately 1 foot above grade. Replacement of the casing and repair of the riser is necessary.

North side of the landfill.

West side of the landfill.

Drainage swale on the west side of the landfill.

South side of the landfill.

East side of the landfill.

Drainage swale on the south side of the landfill.

Signature:

Samantha J. Miller

SOUTH HILL DUMP
SEMI-ANNUAL POST-CLOSURE INSPECTION CHECKLIST

Report No. 004	
Page 1 of 3	
Date: 10/11/2019	Time: 9:00AM

Inspector: Anthony Russo	Project No. 34236
	Weather: Sunny
People Accompanying Inspector:	
	Temp.: Hi 60 °F Low 42 °F

SIGNAGE AND GATE INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Is a sign posted at entrance to the landfill stating that the area is a closed landfill?	☒	☐	☐	No trespassing sign
Is a gate present at the entrance to the landfill?	☒	☐	☐	
Is the gate locked and secured?	☒	☐	☐	

SOIL COVER SYSTEM INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Evidence of erosion of cover soils from surface of landfill (top/sideslopes)?	☐	☒	☐	
Evidence of cracks or depressions in cover soils?	☐	☒	☐	
Evidence of exposed or damaged geomembrane/clay barrier?	☐	☒	☐	

GAS VENTING SYSTEM INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Gas vent structures intact?	☒	☐	☐	
Screens on gas vents intact and unobstructed?	☒	☐	☐	
Settlement of cover system soils in area of gas vents?	☐	☒	☐	
Vapors or odors emanating from gas vents?	☐	☒	☐	
Evidence of stressed vegetation in areas around gas vents or other areas of the landfill?	☐	☒	☐	
Evidence of bubbling surface water on or in the area surrounding the landfill?	☐	☒	☐	

VEGETATIVE COVER SYSTEM INSPECTION

ITEM/CONDITION	YES	NO	NA	COMMENTS
Is vegetation well established over the entire landfill?	☒	☐	☐	
Evidence of stressed vegetation?	☐	☒	☐	
Evidence of erosion or thin vegetative cover?	☐	☒	☐	
Does the landfill need to be mowed?	☐	☒	☐	

SOUTH HILL DUMP
SEMI-ANNUAL POST-CLOSURE INSPECTION CHECKLIST

Report No. 004	
Page 2 of 3	
Date: 10/11/2019	Time: 9:00AM

ITEM/CONDITION	YES	NO	NA	COMMENTS
Evidence of exposed geotextile?	☐	☒	☐	
Presence of woody growth?	☐	☒	☐	
Evidence of ponded water?	☐	☒	☐	
Evidence of debris?	☐	☒	☐	
DRAINAGE SYSTEM INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Evidence of erosion in drainage structures?	☐	☒	☐	
Presence of siltation in drainage structures?	☐	☒	☐	
Evidence of settlement in drainage structures?	☐	☒	☐	
Evidence of restrictions of water flow in drainage ditches and structures?	☐	☒	☐	
LEACHATE INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Evidence of leachate seeps or staining around the perimeter of the landfill?	☐	☒	☐	
Evidence of leachate seeps or staining off the perimeter of the landfill?	☐	☒	☐	
Evidence of leachate seeps or staining in the drainage ditches or structures of the landfill?	☐	☒	☐	
Evidence of leachate seeps or staining on the surface of the landfill?	☐	☒	☐	
MONITORING WELL INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Are the monitoring wells in generally good condition?	☒	☐	☐	
Are well caps installed on the wells?	☒	☐	☐	
Are locks present and secured?	☒	☐	☐	
VECTOR INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Were any vectors observed?	☐	☒	☐	
Evidence of vector activity (tracks, droppings, dens, etc.)	☐	☒	☐	
Evidence of damage due to vector activity?	☐	☒	☐	
SITE ACCESS ROAD INSPECTION				
ITEM/CONDITION	**YES**	**NO**	**NA**	**COMMENTS**
Are site access roads passable?	☒	☐	☐	
Presence of ruts or erosion?	☐	☒	☐	
Are site access roads in generally good condition?	☒	☐	☐	

SOUTH HILL DUMP
SEMI-ANNUAL POST-CLOSURE INSPECTION CHECKLIST

Report No. 004	
Page 3 of 3	
Date: 10/11/2019	Time: 9:00AM

ADDITIONAL NOTES & OBSERVATIONS

Signature:

APPENDIX B

Institutional and Engineering Controls Certification Forms

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-720
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

10/31/2019

Town Of Cortlandville
3579 Terrace Road
Cortland, NY 13045

Re: Property Owner Survey: Site Management Periodic Review
Parcel: 109.00-01-02.000
Site Name: South Hill Dump
Site No.: 712009
Site Address: South Hill Road
Cortlandville, NY 13073

Dear Property Owner:

This letter and attached survey have been mailed to you because you are the listed property owner (or their contact) on which a State Superfund site exists that is currently in the Site Management (SM) phase of remediation. This letter is meant to serve as an informative reminder to you and any tenants, occupants or users of the property that sites in active Site Management must undergo a periodic progress review to ensure that the selected remedy continues to be protective. This process and resulting report, referred to as the Periodic Review Report (PRR), documents the implementation of site specific SM requirements. Section 6.3(b) of DER-10 Technical Guidance for Site Investigation and Remediation (see "IV. Reference Documents" in the attached) provides guidance regarding the information that is included in a typical PRR. Additionally, the site referenced may be comprised of multiple tax parcels with different owners. This letter only pertains to the portion of the site that exists on property which is under your direct ownership. To assist the NYSDEC in its periodic review, please respond, sign and date the attached survey (Enclosure 1 "Institutional and Engineering Controls - Property Owner Survey") by January 04, 2020.

Site Management is defined in regulation at 6 NYCRR 375-1.2(at), and in Chapter 6 of DER-10 (see also "III. Helpful Definitions" in the attached). SM may be governed by multiple individual documents (e.g., an Operation, Maintenance, and Monitoring Plan; a Soil Management Plan; etc.) or under the umbrella of one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

When you respond to this survey, please include the enclosed form (Enclosure 1) which documents that, to the best of your knowledge, all Site Management requirements that pertain to the site on your property are being met. The Institutional Controls (ICs) and Engineering Controls (ECs) certification portion of the form should be completed, signed and returned to the NYSDEC. If you cannot verify that all SM requirements are being met, please provide adequate information in response so that actions may be taken to restore the level of protection intended. Instructions for completing the attached forms are included as Enclosure 2 "Survey Instructions."

The survey form should be submitted in either paper or electronic format. Any supporting documents or information (e.g., collected data, reports, copy of current deed) should be submitted in electronic format only. These documents and electronic submissions should be sent to:

David Chiusano, Project Manager.
New York State Department of Environmental Conservation
Division of Environmental Remediation, BURE
625 Broadway
Albany, NY 12233-7017

Phone number: 518-402-9795. E-mail: david.chiusano@dec.ny.gov

Finally, as the state and condition of your property may be influenced by tenants or others users, please share the information contained in this letter and survey so that all controls put in place will provide the greatest level of protection of public health and the environment.

Thank you for your cooperation and assistance.

Sincerely,

David Chiusano, Project Manager
NYSDEC

Enclosures

ec: David Chiusano, Project Manager
David Harrington, Section Chief

Enclosure 1
Institutional and Engineering Controls - Property Owner Survey

Site Details **Box 1**

Site No. **712009**

Site Name South Hill Dump

Site Address: South Hill Road Zip Code: 13073
City/Town: Cortlandville
County: Cortland
Site Acreage: 10.9

Reporting Period: December 05, 2018 to December 05, 2019

	YES	NO
1. Is the information above correct?	☒	☐
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?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2, 3 or 4, include documentation with this form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Closed Landfill	☒	☐
7. Are all Institutional Controls (ICs) in place and functioning as designed?	☒	☐

Richard C. Tupper
Signature of Property Owner

11/6/19
Date

SITE NO. 712009 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
109.00-01-02.000	Town of Cortlandville, Town Supervisor	Landuse Restriction Monitoring Plan Site Management Plan Ground Water Use Restriction IC/EC Plan

A series of ICs are required to implement, maintain and monitor the ECs. The Environmental Easement (EE) requires compliance with the ICs.The EE for this site was recorded on 10/11/13 in Cortland County as instrument #2013-05304.

The EE ensures that:

- All ECs must be operated and maintained as specified in the SMP
- All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP
- Environmental monitoring must be performed as defined in the SMP
- Data and information pertinent to SM for the Controlled Property must be reported at the frequency and in a manner defined in the SMP
- On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the Environmental Easement places the following restrictions on the property:

- Required compliance with the approved SMP. Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) and/or the NYSDEC
- The owner of the Property shall provide information to the NYSDEC to assist it in carrying out its obligation to provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the NYSDEC or Relevant Agency, which will certify that the IC/ECs put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired
- The owner of the Property shall continue in full force and effect any IC/ECs required for the Remedy and shall not, through any act or omission, interfere with the NYSDEC's maintenance and monitoring of such controls, unless the owner first obtains permission to discontinue such controls from the NYSDEC or Relevant Agency, in compliance with the approved SMP subject to modifications as approved by the NYSDEC or Relevant Agency
- Limit the use and development of the property to the current use as a closed and capped/covered landfill only.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
109.00-01-02.000	Fencing/Access Control Cover System

Because remaining contamination is present at this Site, ECs and ICs have been implemented to protect public health and the environment for the applicable future use. The Controlled Property has the following ECs:

- a cover system placed over the landfilled waste
- site access controls
- surface water drainage conveyance

Parcel	Engineering Control
• landfill gas vents	

Box 5

Periodic Review Report (PRR) Survey Statements

For each Institutional or Engineering control listed in Boxes 3 and/or 4, by checking "YES" below I believe all of the following statements to be true:

(a) the Institutional Control(s) and/or Engineering Control(s) employed at this site remain 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; and

(d) if a Site Management Plan (SMP) exists, nothing has occurred that would constitute a violation or failure to comply with the SMP for this Control.

YES	NO
☒	☐

Richard C. Tupper — Signature of Property Owner

11/6/19 — Date

Enclosure 2
Survey Instructions

I. Verification of Site Details (Box 1 and Box 2):
Answer the YES/NO questions in the Verification of Site Details Section. The Property Owner may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)
Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Property Owner should petition the Department separately to request approval to remove the control.

In Box 5, complete the certification for all components, as applicable, by checking the corresponding YES/NO checkbox.

If you cannot respond "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why a "YES" response could not be rendered. Note that this survey form should be submitted even if an IC or EC cannot be certified at this time.

III. Helpful Definitions
"Change of use" means the erection of any structure on a site, the paving of a site for use as a roadway or parking lot, the creation of a park or other recreational facility on a site, any activity that is likely to disrupt or expose contamination or increase direct human or environmental exposure, or any other conduct that will or may tend to prevent or significantly interfere with a proposed, ongoing, or completed remedial program.

"Site management" means the activities undertaken as the last phase of the remedial program at a site which continue after a certificate of completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the institutional and engineering controls required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

IV. Reference Documents

DER-10	http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf
Part 375-2.2(a)	http://www.dec.ny.gov/regs/4373.html#15089

IC CERTIFICATIONS
SITE NO.

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 Richard Tupper, Town Supervisor at 3577 Terrace Road, Cortlandville, NY 13045,
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

Date

IC/EC CERTIFICATIONS

Box 7

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 Christopher Burns (print name) 300 South State Street, Ste 600, Syracuse, NY 13202 (print business address),

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)

Signature of Professional Engineer for the Owner or Remedial Party, Rendering Certification (Stamp Required for PE)

11/15/19
Date