HEOROT
POWER

Cayuga Operating Company, LLC
228 Cayuga Drive
Lansing, NY 14882
Tel: 607-533-7913
Fax: 607-533-8744

February 22, 2018

Mr. Thomas Annal, P.E.
Materials Management Supervisor
New York State Department of Environmental Conservation
615 Erie Boulevard West
Syracuse, NY 13204

Subject: Cayuga Operating Company, LLC Annual Solid Waste Facility Report 2017

Dear Mr. Annal:

Pursuant to 6 NYCRR Part 360 for the subject solid waste management facility, please find enclosed the 2016 Annual Solid Waste Facility report for the Cayuga Operating Company Landfill. Please note that the financial assurance was last submitted on October 19, 2016 and approved by the Department on November 6, 2016. Awaiting Department approval of the certification report for the final cover of the 3.75 acre eastern section of the phase I solid waste disposal site, which was submitted on August 22, 2017, to update the financial assurance documents.

If you have any questions or require additional information, please feel free to contact me at 607-533-7913 Ext. 2222 or by email at john.marabella@usnypp.com.

Sincerely,

John Marabella
Environmental Director

cc: NYSDEC-Division of Materials Management (Email: swpermit@gw.dec.state.ny.us)
Jim Gruppe (NYSDEC Syracuse)-Cover Letter Only

SECTION 2 - SITE LIFE

1. Landfill Capacity Utilized Last Year (reporting year).

   a. What is the estimated landfill capacity that was utilized during the reporting year?

   5,356 Cubic Yards of Airspace

   Please do not report units as pounds per cubic yard.

   b. What is the estimated in-situ waste density for the reporting year?

   1.074 Tons/Cubic Yard

2. Remaining Constructed Capacity

   a. What is the remaining capacity of the landfill that is already constructed?

   397,376 Cubic Yards of Airspace

   b. What is the estimated remaining life of the constructed capacity?

   74 Years 3 Months

   at 5,752 Tons/Year.*

   * Please note that this tonnage rate must include all materials placed in the landfill, i.e., waste, soil, cover, alternative daily covers, etc.

   c. The tonnage rate reported under 2.b. is based on (select one):

   X The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   _____ Permit limit

   Other (explain): _____

3. Permitted Capacity Still to be Constructed

   a. What is the remaining but not yet constructed landfill capacity that is authorized by a Part 360 permit?

   0.0 Cubic Yards of Airspace

   b. What is the projected life of capacity reported in 3.a?

   _____ Years _____ Months

   at _____ Tons/Year.*

   * Please note that this tonnage rate must include all materials disposed in the landfill, i.e., waste, and soil and alternative daily covers.

   c. The tonnage rate reported under 3.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   _____ Permit limit

   Other (explain): _____

4. Capacity Proposed in a Part 360 Permit Application

What is the capacity of any expansion proposed in a Part 360 permit application that has been submitted to the Department but not authorized by a permit as of the end of the reporting period?

0.0 Cubic Yards of Airspace

5. Estimated Potential Future Capacity Not Permitted or in an Application (optional)

What is the estimated capacity of any potential future expansion at the facility that is not yet authorized by a permit or proposed in a Part 360 permit application that has been submitted to the Department?

_____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

Name of off-site leachate treatment facility(s) utilized: N/A

Does the landfill have a constructed liner and a leachate collection system? ▪ Yes ____ No

Enter the quantity of primary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:
(Note: For double-lined landfills this should not include the volume of leachate collected from secondary leachate collection and removal systems.)

For **each cell**, please report the **acreage** and the **primary leachate** amount.

Clear Form

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2018.

A. **This annual/quarterly report is for the year of operation from January 01, 2017 to December 31, 2017**

B. **Quarterly Report for: ___Quarter 1 ___Quarter 2 ___Quarter 3 ___Quarter 4**

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION

FACILITY NAME:			
Cayuga Operating Company, LLC			
FACILITY LOCATION ADDRESS:	**FACILITY CITY:**	**STATE:**	**ZIP CODE:**
228 Cayuga Drive	Lansing	NY	14882
FACILITY TOWN:	**FACILITY COUNTY:**	**FACILITY PHONE NUMBER:**	
Lansing	Tompkins	607-533-7895	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report).		**NYSDEC REGION #:** 7	

360 PERMIT #:	DATE ISSUED:	DATE EXPIRES:	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:
7-3052-00069/00003	3/15/2013	3/14/2023	55N02

FACILITY CONTACT:	☐ public ☒ private	CONTACT PHONE NUMBER:	CONTACT FAX NUMBER:
Jeff Lamphere		607-533-7913 Ext. 2241	607-533-8744

CONTACT EMAIL ADDRESS: jlamphere@heorotpower.com

OWNER INFORMATION

OWNER NAME:	OWNER PHONE NUMBER:	OWNER FAX NUMBER:	
Riesling Power, Inc.	607-533-7913	607-533-8744	
OWNER ADDRESS:	**OWNER CITY:**	**STATE:**	**ZIP CODE:**
228 Cayuga Drive	Lansing	NY	14882
OWNER CONTACT:	**OWNER CONTACT EMAIL ADDRESS:**		
John Marabella	jmarabella@heorotpower.com		

OPERATOR INFORMATION

OPERATOR NAME: ☐ *same as owner*	☐ public ☒ private
Cayuga Operating Company, LLC	

PREFERENCES

Preferred address to receive correspondence:	☒ *Facility location address*	☐ *Owner address*
☐ *Other (provide):*		
Preferred email address:	☒ *Facility Contact*	☐ *Owner Contact*
☐ *Other (provide):*		
Preferred individual to receive correspondence:	☒ *Facility Contact*	☐ *Owner Contact*
☐ *Other (provide):*		

Did you operate in 2017? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 22. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

Submit (attached to this form) a copy of the maintenance logs which document compliance with the Operation and Maintenance Manual's schedule for the routine annual flushing and inspection of the primary leachate collection and removal system. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Monthly Landfill Inspection Logs Attached

Submit (attached to this form) a tabulated compilation of the semi-annual primary leachate quality data collected throughout the year including a summary comparing this year's data with the previous year's data and a summary discussion of results. This list should identify sample location(s) and method of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

To be submitted as part of the Annual Solid Waste and Groundwater Monitoring Report which is submitted by March 1, 2017 as stated in the Part 360 Solid Waste Permit

SECTION 4 - SECONDARY LEACHATE

Does landfill have a double liner system with a secondary leachate collection and removal system? ____Yes ____No

Submit (attached to this form) a tabulated compilation of the semi-annual secondary leachate quality data collected throughout the year including a summary comparing this year's data with all previous years' data and a summary discussion of results. This list should identify sample location(s) and methods of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Please report total cost for the year, not cost/gal.

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: $0.00

Total quantity treated: _____ gal

Enter the quantity of secondary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:

For **each cell**, please report the **acreage** and the **secondary leachate** amount.

Reprinted (12/17)

	SECONDARY LEACHATE COLLECTED (GALLONS)						SECONDARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	N/A						N/A					
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	N/A						N/A					
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS

For each type of waste material that the Department has approved for use as alternative daily cover, intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., daily cover, intermediate cover, etc.), and source of material. (If material is from a solid waste facility also provide facility name, address, NYS Planning Unit, County/ Province, and State/Country.) **Refer to the list of NYS Planning Units that can be found at the end of this report.**

Type of Solid Waste	Weight (tons/year)	Use	NYS Planning Unit (See Attached List of NYS Planning Units)	County or Province	State or Country	Source (Facility and Address)
Aggregate/Concrete	24.801	Daily Cover				
Contaminated Soil						
Foundry Sand						
Glass						
Industrial Waste (specify)						
MSW/Wood Ash						
Paper Mill Sludge						
Processed C&D						
Shredder Fluff						
Tire Chips						
Wood/Wood Chips						
Other (specify)						
Total ADC	24.801					
Total Beneficial Use Determination Materials	24.801					

Percent Alternative Daily Cover (ADC) Calculation

ADC Calculations: Total Tons ADC/Total Tons Waste Disposed x 100 = 0.43%

Please note the calculation **is**: Tons ADC (from table above)/Tons Solid Waste (from table in Section 6) x 100 and **Not**: Tons ADC / (Tons Solid Waste + ADC) x 100

	PRIMARY LEACHATE COLLECTED (GALLONS)						PRIMARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 38 Acres	Cell 2 Acres	Cell 3 Acres	Cell 4 Acres	Cell 5 Acres	Cell 6 Acres	Cell 1 Acres	Cell 2 Acres	Cell 3 Acres	Cell 4 Acres	Cell 5 Acres	Cell 6 Acres
January	4,762,969											
February	2,512,710											
March	5,066,768											
April	4,717,144											
May	2,218,007											
June	4,591,116											
July	6,891,236											
August	0											
September	1,926,074											
October	0											
November	3,935,738											
December	0											
ANNUAL	36,621,882											

	PRIMARY LEACHATE RECIRCULATED (GALLONS)						PRIMARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 Acres	Cell 2 Acres	Cell 3 Acres	Cell 4 Acres	Cell 5 Acres	Cell 6 Acres	Cell 1 38 Acres	Cell 2 Acres	Cell 3 Acres	Cell 4 Acres	Cell 5 Acres	Cell 6 Acres
January							4,762,969					
February							2,512,710					
March							5,066,768					
April							4,717,144					
May							2,218,007					
June							4,591,116					
July							6,891,236					
August							0					
September							1,926,074					
October							0					
November							3,935,798					
December							0					
ANNUAL							36,621,882					

SECTION 6 - SOLID WASTE DISPOSED

Provide the tonnages of solid waste disposed. Exclude Beneficial Use Material amounts reported in Section 5 and Recyclable Material amounts reported in Section 8. Specify the methods used to measure the quantities disposed and the percentages measured by each method:

_____% Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Asbestos							
Ash (Coal)	143.93	149.17	528.38	257.96	1623.55	1385.45	80.24
Ash (MSW Energy Recovery)							
Construction & Demolition Debris (mixed)							
Industrial Waste (Including Industrial Process Sludges)	0	12.56	96.90	66.94	112.82	116.02	127.92
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)							
Oil/Gas Drilling Waste							
Petroleum Contaminated Soil							
Sewage Treatment Plant Sludge							
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Disposed	143.93	161.73	625.28	324.90	1736.37	1501.47	208.16

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee ($/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)		82.96	204.55	0	0	253.41	4709.60	12.90
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)								
Industrial Waste (Including Industrial Process Sludges)		0	179.33	205.62	48.18	75.61	1041.93	2.85
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)								
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge								
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Total Tons Disposed		82.96	383.88	205.62	48.18	329.02	5751.53	

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Identify the service area of the waste. The Total Tons Received reported below should equal the Total Tons Disposed in Section 6 (Solid Waste Disposed). DO NOT REPORT IN CUBIC YARDS!

1) Direct hauled from the generator of the waste In the case where the waste is hauled to your facility from the generator (i.e. hauled from residences, commercial establishments, etc.). "Direct Haul" is the appropriate response in Column 2 under "Service Area." Please report the tonnage by waste type and identify the state, county and planning unit where it was generated; or

2) Sent to your facility from another solid waste management facility. Waste may be sent to your transfer station from another solid waste management facility. In this case, please report the tonnage by waste type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

Specify transport method and percentages of total waste transported by each:

_____% Road _____% Rail _____% Water _____% Other (specify:_____)

Explain which waste types and service areas below are included in these transport methods _____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED** (Name & Address) **OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECEIVED**
Asbestos					
Ash (Coal)					
Ash (MSW Energy Recovery)					
Construction & Demolition Debris (mixed)					

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED** (Name & Address) **OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECEIVED**
Industrial Waste (Including Industrial Process Sludges)					
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)					
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge					
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
				TOTAL RECEIVED (tons):	

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility also a permitted or registered Recyclables Handling & Recovery Facility?

☐ Yes; Complete Section 9 for material recovered from the mixed solid waste stream. Complete a Recyclables Handling & Recovery Facility (RHRF) form for material received as source separated. The RHRF form is located at: http://www.dec.ny.gov/chemical/52706.html .

■ No; Complete Section 9 for material recovered from the mixed solid waste stream and for material received as source separated.

A. Service Area of Recyclable Material Received

Identify the service area of the material. DO NOT REPORT IN CUBIC YARDS!

1) Direct hauled from the generator of the recyclables. In the case where the recyclables are hauled to your facility from the generator (i.e. hauled from residences, commercial establishments, etc.), "Direct Haul" would be the appropriate response in Column 2 under "Service Area". Please report the tonnage by material type and identify the state, county and planning unit where it was generated; or

2) Sent to your facility from another solid waste management facility. Recyclables may be sent to your facility from another solid waste management facility. In this case, please report the tonnage by material type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

Explain which materials and service areas below are included in these transport methods _____

SERVICE AREA OF RECYCLABLE MATERIAL RECEIVED					
MATERIAL	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Commingled Containers (metal, glass, plastic)					
Commingled Paper (all grades)					
Single Stream (total)					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste (curbside)					
Other (specify)					
				TOTAL RECEIVED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS

B. Material Recovered

Identify the name of the destination facility to which the material was sent from your facility, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount of material transported. **Refer to the list of NYS Planning Units that can be found at the end of this report.**
DO NOT REPORT IN CUBIC YARDS!

Specify transport method and percentages of total material transported by each:

_____% Road _____% Rail _____% Water _____% Other (specify: _____)

Explain which materials and destinations below are included in these transport methods _____

PAPER RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Paper (all grades)					
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
TOTAL PAPER RECOVERED (tons):					

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass					
Industrial Scrap Glass					
Other Glass (specify)					
				TOTAL GLASS RECOVERED (tons):	

METAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal (from MSW)					
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
				TOTAL METAL RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

PLASTIC RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Mixed Plastic (#1 - #7)					
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
				TOTAL PLASTIC RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Containers (metal, glass, plastic)					
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					
				TOTAL MIXED MATERIAL RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MISCELLANEOUS MATERIAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Electronics					
Textiles					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste (curbside)					
Other (specify)					
				TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons):	

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET – flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET – baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC – styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE – baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 9 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ■ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

Radiation Monitoring

Does your facility use a fixed radiation monitor? _____ Yes __■__ No

Identify Manufacturer _____ and Model _____ of fixed unit.

Does your facility use a portable radiation monitor? _____ Yes __■__ No

Identify Manufacturer _____ and Model _____ of portable unit.

If the radiation monitors have been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
2008			87118		4849			18726	110693	
2009			15231		3906			7919	27056	
2010			39935		3496			6810	50241	
2011			15096		5043			1057	21196	
2012			12316		1275			0	13591	
2013			38199		2267			0	40466	
2014			27290		2163			0	29453	
2015			19209		1878			0	21087	
2016			16172		1452			0	17624	
2017			4710		1042			0	5752	
WIP Cumulative Total			275,276		27,371			34,512	337,159	

Overall in place volume 313,928 cubic yards

Method for determining waste composition, if known. Scale Weights

Explain if closed landfills are included above _____

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 1

Original* section used (years) from 1975 to Present

Section Footprint 38 acres

Capped with approved final cover system Yes ■ No _____

Percent capped 67%

Waste in Place: _____ Tons _____ Cubic Yards, if known

Next* section used (years) from _____ to _____

Section Footprint _____ acres

Capped with approved final cover system Yes _____ No _____

Percent capped _____

Waste in Place: _____ Tons _____ Cubic Yards, if known

* If there are additional landfill sections, phases or cells, please provide the same waste in place information on additional sheets and attach to form.

SECTION 11 - LANDFILL GAS

Does the landfill have a landfill gas collection & control system?
Yes ____ No ■ If Yes: Active ___ Passive ___

Number of gas wells: _____

Total landfill footprint acreage _____

Total landfill acreage from which gas is collected _____

Landfill sections from which gas is collected _____

Landfill acreage from which gas is collected for energy recovery _____

Measured Methane Generation Rate*, k _____

Measured Potential Methane Generation Capacity*, L_o _____ m^3/Mg

NMOC Concentration* _____ ppmv as hexane

Does the landfill require a Title V Permit? Yes _____ No _____

Name of Landfill Gas Recovery (gas to energy or other use) Facility: _____

* Note: If Concentration NMOC, Lo and k are not known or included, default values will be used to calculate the NMOCs emissions from the Landfill.

Flare

Open and Enclosed Flares located at the Landfill and the Landfill Gas Recovery Facility:

Number of Flares: _____

Type of Flare: Opened Flare _____ Enclosed Flare _____

Please report units in cubic feet

Quantity of Gas Collected and Flared Annually _____ cubic feet
Flare Hours of Operation per Year _____ hours/year
Methane Percentage in Landfill Gas before flaring _____ %
Methane Destruction efficiency _____ %

Candlestick Flares:

Number of Candlestick Flares _____
Estimate of Gas Flared Candlestick Flare _____ cubic feet

Gas To Energy

Please report units in cubic feet

Number of Internal Combustion Engines: _____

Quantity of Gas collected for Internal Combustion Engine Annually _____ cubic feet
Methane Destruction efficiency _____ %
Methane Percentage in Landfill Gas before combustion _____ %
Utility Company Receiving Electricity _____

Gas Processed for Use (Other than gas to electricity)

Quantity of Gas Collected for Processing _____ cubic feet
Methane Percentage in Landfill Gas before processing _____ %
On-site or Off-site User of Gas _____

Landfill Gas Recovery Facility/Landfill Data

Facility Contact _____ Phone # (_____)_____-_____

Contact e-mail address _____ Fax # (_____)_____-_____

Operation and maintenance cost for calendar year: $_____

Does the LGRF experience shut downs: _____Yes _____No

If yes, indicate reasons for shut downs. List required submissions that have been attached to this form or the reasons for not attaching a required piece of information:

_____

_____

_____

_____

Year landfill opened: _____ Anticipated landfill closure date: _____

Reprinted (12/17)

SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure and post-closure care?

■ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ■ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ■ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 15 - ANALYTICAL RESULTS

Submit (attached to this form) tables showing the sample collection date, the analytical results [including all peaks even if below the Method Detection Limits (MDL)], designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Submitted as part of the Annual Solid Waste and Groundwater Report which submitted by March 1, 2018 as stated in the Part 360 Solid Waste Facility Permit.

SECTION 16 - COMPARING DATA

Submit (attached to this form) tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to response in Section 15

Results of Condensate Sampling

Submit (attached to this form) condensate quality monitoring results accomplished in accordance with condensate sampling. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

_____

_____

_____

Landfill Gas Utilized For Energy Recovery

Provide the following information for the landfill gas recovered for energy. **DO NOT INCLUDE THE GAS FLARED!**

	Landfill Gas Collected for Energy Recovery (Cubic Feet)	Steam* Generated (Cubic Feet)	Total Electricity* Generated for onsite and offsite use (K.W.H.)	Total Gas Processed for use other than electricity generation (Cubic Feet)	Condensate Generated (Gallons)	Facility Operation (Hours)
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						
ANNUAL TOTAL						

* Provide where applicable.

Normal Weekdays of Operation _____ Normal Hours of Operation_____

Electricity Generated and used/marketed offsite _____KWH
Electricity Generated and used onsite _____ KWH
Gas Processed and used/marketed offsite _____ cubic feet
Gas Processed and used onsite _____ cubic feet

Describe the collection, storage, treatment and disposal techniques used in managing the condensate:

_____

_____

Reprinted (12/17)

SECTION 17 - DISCUSSION OF RESULTS

Submit (attached to this form) a summary of any contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the Existing, Operational and Contingency water quality monitoring requirements. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to response in Section 15

SECTION 18 - DATA QUALITY ASSESSMENT

Submit (attached to this form) any required data quality assessment reports. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to response in Section 15

SECTION 19 - SUMMARIES OF MONITORING DATA

Submit (attached to this form) a summary of the water quality information presented in Sections 16 and 17 for the year of operation for which the Annual Report is made, noting any changes in water quality which have occurred throughout the year. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to response in Section 15

SECTION 20 - SURFACE IMPOUNDMENTS

Does this landfill have a surface impoundment?

☐ Yes ■ No If yes, repeat Sections 15 through 18 above for Quarterly Reports and Section 19 above for Annual report. Attach additional submissions required by this section.

SECTION 21 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ■ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

Reprinted (12/17)

SECTION 22 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit the completed form by email or mail to the appropriate Regional Office (See attachment for Regional Office email & mailing addresses and Solid Waste Contacts.)

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Permitting and Planning
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits was prepared by me or under my supervision and direction and is true to the best of my knowledge and belief, and that I have the authority to sign this report form pursuant to 6 NYCRR Part 360. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Signature

2/22/18
Date

John C. Marabella
Name (Print or Type)

Environmental Director
Title (Print or Type)

jmarabella@heorotpower.com
Email (Print or Type)

228 Cayuga Drive
Address

Lansing
City

New York 14882
State and Zip

(607) 533-7913
Phone Number

ATTACHMENTS: ▪ YES ☐ NO
(Please check appropriate line)

Reprinted (12/17)

MONTHLY INSPECTION REPORTS

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 1/26/17 Time:1100 hrs.

Weather Conditions:Cloudy

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
		X	6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

	X		
____	____	____	11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			
____	____	____	12. Monitoring wells are intact.

OTHER

X			
____	____	____	13. All required equipment is on-site and operational.
X			
____	____	____	14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
	X		
____	____	____	15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			
____	____	____	16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) As a result of the pond liner construction,a significant amount of water was allowed to back up into the groundwater suppression system under the phase 2 capped portion of the landfill.
There was an upset to the working face of the current fill area during a heavy rain/thaw event that resulted in a release of contact runoff to Milliken Creek.The affected areas have been cleaned and site drainage/runoff improvements have been implemented as remedial measures.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: No testing done
Discharging Ash Pond as needed for pond liner project.
Leak Detection Flow= **27126 gallons/month**

Signature of Inspector

cc: Jeff Lamphere/Marty Hilliard
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:1/1/17-1/8/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:12/28/16 SAMPLE TYPE:SPDES C/24 SAMPLER:TMS

FIELD PH: Fe-T:0.2 Mn-T:<0.02 Zn-T:<0.01

NH3:<0.1 As-T:<0.005 TSS:4 Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:1/1/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:1/1/17 @ 0001 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.0
END DATE & TIME:1/8/17 @ 2400 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.0

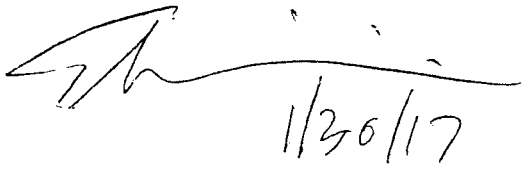
SITE OPERATOR(S):TMS GALLONS DISCHARGED:1302888

OF DAYS OF DISCHARGE:8
MAXIMUM GALLONS PER DAY:162861
AVERAGE GALLONS PER DAY:162861
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:1/3/17 @ 0930 hrs.
COMPOSITE SAMPLE END:1/4/17 @ 0850 hrs.

COMMENTS:Summary of weekly pH's:N/A

POND LINER CONSTRUCTION PROJECT IN PROGRESS
Pond level below staff gauge.Measuring flow with magnetic flow meter at the discharge of the TSS basin.

2.1(V) x .3(D) x .4(W) x 7.48 x 60 x 60 x 24 = 162861 GPD



CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:1/9/17-1/15/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:1/6/17 SAMPLE TYPE:GRAB/SCAN SAMPLER:TMS

FIELD PH: Fe-T:0.1 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:1/9/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:1/9/17 @ 0001 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.1
END DATE & TIME:1/15/17 @ 2400 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2

SITE OPERATOR(S):TMS GALLONS DISCHARGED:1140027

OF DAYS OF DISCHARGE:7
MAXIMUM GALLONS PER DAY:162861
AVERAGE GALLONS PER DAY:162861
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:SAMPLER FROZEN,ALL SAMPLES
COMPOSITE SAMPLE END:COLLECTED AS GRABS

COMMENTS:Summary of weekly pH's:N/A

POND LINER CONSTRUCTION PROJECT IN PROGRESS
Pond level below staff gauge.Measuring flow with magnetic flow meter at the discharge of the TSS basin.

2.1(V) x .3(D) x .4(W) x 7.48 x 60 x 60 x 24 = 162861 GPD

1/31/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:1/16/17-1/22/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:1/13/17 SAMPLE TYPE:GRAB/SCAN SAMPLER:TMS

FIELD PH: Fe-T:0.5 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:1/16/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:1/16/17 @ 0001 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2
END DATE & TIME:1/22/17 @ 2400 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2

SITE OPERATOR(S):TMS GALLONS DISCHARGED:1140027

OF DAYS OF DISCHARGE:7
MAXIMUM GALLONS PER DAY:162861
AVERAGE GALLONS PER DAY:162861
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:1/19/17 @ 0900 HRS.
COMPOSITE SAMPLE END:1/20/17 @ 0900 HRS.

COMMENTS:Summary of weekly pH's:N/A

POND LINER CONSTRUCTION PROJECT IN PROGRESS
Pond level below staff gauge.Measuring flow with magnetic flow meter at the discharge of the TSS basin.

2.1(V) x .3(D) x .4(W) x 7.48 x 60 x 60 x 24 = 162861 GPD

1/22/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:1/23/17-1/29/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:1/20/17 SAMPLE TYPE:C24/SPDES SAMPLER:TMS

FIELD PH:8.2 Fe-T:0.1 Mn-T:<0.02 Zn-T:<0.01

NH3:<0.1 As-T:<0.01 TSS:2 Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:1/23/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:1/23/17 @ 0001 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2
END DATE & TIME:1/29/17 @ 2400 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2

SITE OPERATOR(S):TMS GALLONS DISCHARGED:1140027

OF DAYS OF DISCHARGE:7
MAXIMUM GALLONS PER DAY:162861
AVERAGE GALLONS PER DAY:162861
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:1/23/17 @ 0830 HRS.
COMPOSITE SAMPLE END:1/24/17 @ 0830 HRS.

COMMENTS:Summary of weekly pH's:N/A

POND LINER CONSTRUCTION PROJECT IN PROGRESS
Pond level below staff gauge.Measuring flow with magnetic flow meter at the discharge of the TSS basin.

2.1(V) x .3(D) x .4(W) x 7.48 x 60 x 60 x 24 = 162861 GPD

2/2/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:1/30/17-1/31/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:1/25/17 SAMPLE TYPE:C24/SPDES SAMPLER:TMS

FIELD PH:8.2 Fe-T:0.2 Mn-T:<0.02 Zn-T:<0.01

NH3:<0.1 As-T:0.01 TSS:5 Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:1/30/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:1/30/17 @ 0001 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2
END DATE & TIME:1/31/17 @ 2400 HRS. LEVEL:0.0 VOLUME:0
FIELD PH:8.2

SITE OPERATOR(S):TMS GALLONS DISCHARGED:40000

OF DAYS OF DISCHARGE:2
MAXIMUM GALLONS PER DAY:20000
AVERAGE GALLONS PER DAY:20000
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:Sampler frozen,All samples
COMPOSITE SAMPLE END:collected as grabs

COMMENTS:Summary of weekly pH's:N/A

POND LINER CONSTRUCTION PROJECT IN PROGRESS
Discharge flow estimated at 20000 GPD.

2/15/17

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 2/28/17 Time:0930 hrs.

Weather Conditions:Sunny/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

____	X ____	____	11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X ____	____	____	12. Monitoring wells are intact.

OTHER

X ____	____	____	13. All required equipment is on-site and operational.
X ____	____	____	14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
____	X ____	____	15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X ____	____	____	16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) Access to upper area of working face is not possible at this time due to ramp condition and material handling challenges.The road behind the pond needs to be graded and filled,the road going from the TSS basin down to the discharge sample manhole needs to be graded and filled as well.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: No testing done

Leak Detection Flow= **26631 gallons/month**

Signature of Inspector

cc: Jeff Lamphere/Marty Hilliard
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:2/21/17-3/1/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:1/31/17 SAMPLE TYPE:C24/SPDES SAMPLER:TMS

FIELD PH:8.2 Fe-T:<0.05 Mn-T:<0.02 Zn-T:<0.01

NH3:<0.1 As-T:0.02 TSS:<3 Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:2/21/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:2/21/17 @ 1000 HRS.
FIELD PH:8.2
END DATE & TIME:3/1/17 @ 1600 HRS.
FIELD PH:8.3

SITE OPERATOR(S):TMS GALLONS DISCHARGED:2512710

OF DAYS OF DISCHARGE:9
MAXIMUM GALLONS PER DAY:279190
AVERAGE GALLONS PER DAY:279190
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:2/21/17 @ 1300 HRS.
COMPOSITE SAMPLE END:2/22/17 @ 1200 HRS.

COMMENTS:Summary of weekly pH's:N/A

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)2.7 x (D)0.4 x (W)0.4 x 7.48 x 60 x 60 x 24= 279190 GPD

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 3/24/17 Time:1000 hrs.

Weather Conditions:Cloudyy/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

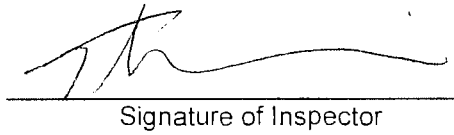
OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
	X		15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) Access to upper area of working face is not possible at this time due to ramp condition and material handling challenges.The road behind the pond needs to be graded and filled,the road going from the TSS basin down to the discharge sample manhole needs to be graded and filled as well.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: No testing done

Leak Detection Flow= **20050 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Marty Hilliard
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:3/21/17-4/3/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:3/1/17 SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:8.3 Fe-T:0.2 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:3/21/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:3/21/17 @ 0800 **HRS.**
FIELD PH:8.5
END DATE & TIME:4/3/17 @ 1400 **HRS.**
FIELD PH:8.4

SITE OPERATOR(S):TMS GALLONS DISCHARGED:5066768

OF DAYS OF DISCHARGE:14
MAXIMUM GALLONS PER DAY:361912
AVERAGE GALLONS PER DAY:361912
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:3/21/17 @ 0930 **HRS.**
COMPOSITE SAMPLE END:3/22/17 @ 0905 **HRS.**

COMMENTS:Summary of weekly pH's:N/A

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)3.5 x (D)0.4 x (W)0.4 x 7.48 x 60 x 60 x 24= 361912 GPD

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 4/28/17 Time:0900 hrs.

Weather Conditions:Sunny/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
X			15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:4/6/17 = 89.1 lbs./cu.ft.

Leak Detection Flow= **36523 gallons/month**

Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:4/12/17-4/18/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:4/3/17 SAMPLE TYPE:GRAB SAMPLER:TMS

FIELD PH:8.4 Fe-T:0.2 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:4/12/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:4/12/17 @ 1500 HRS.
FIELD PH:8.7
END DATE & TIME:4/18/17 @ 1400 HRS.
FIELD PH:8.5

SITE OPERATOR(S):TMS GALLONS DISCHARGED:2605771

OF DAYS OF DISCHARGE:7
MAXIMUM GALLONS PER DAY:372253
AVERAGE GALLONS PER DAY:372253
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:4/12/17 @ 1500 HRS.
COMPOSITE SAMPLE END:4/13/17 @ 1105 HRS.

COMMENTS:Summary of weekly pH's:N/A

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)3.6 x (D)0.4 x (W)0.4 x 7.48 x 60 x 60 x 24= 372253 GPD

4/21/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:4/24/17-5/4/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:4/17/17 SAMPLE TYPE:GRAB SAMPLER:TMS

FIELD PH:8.5 Fe-T:0.1 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:4/24/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:4/24/17 @ 0900 HRS.
FIELD PH:8.3
END DATE & TIME:5/4/17 @ 1200 HRS.
FIELD PH:8.0

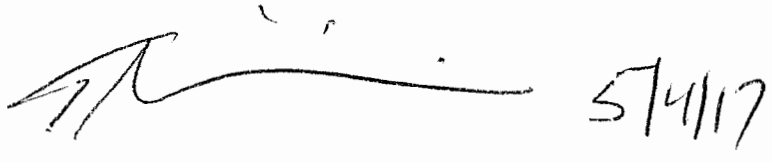
SITE OPERATOR(S):TMS GALLONS DISCHARGED:2111373

OF DAYS OF DISCHARGE:11
MAXIMUM GALLONS PER DAY:191943
AVERAGE GALLONS PER DAY:191943
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:4/24/17 @ 1030 HRS.
COMPOSITE SAMPLE END:4/25/17 @ 0905 HRS.

COMMENTS:Summary of weekly pH's:4/28=8.4

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)3.3 x (D)0.3 x (W)0.3 x 7.48 x 60 x 60 x 24= 191943 GPD



FIELD DENSITY TEST - SAND CONE METHOD

Sand Cone Apparatus No. _____ Date of Test 4/6/17 Test No. _____

Method of Compaction Dozer Test Location Cayuga Nine Landfill

Type of Compactor _____ Area Represented _____

Number of Passes 2-4 Material Cayuga FA

Inspector T. Sylvia Layer Designation _____

Thickness 6-8"

1.	Weight of apparatus filled with sand	13.61 lb.
2.	Weight of apparatus and remaining sand	4.81 lb.
3.	Weight of sand in hole and cone (Item 1 minus Item 2)	8.80 lb.
4.	Weight of sand in cone	3.53 lb.
5.	Weight of sand in hole (Item 3 minus Item 4)	5.27 lb.
6.	Bulk density of sand	91.3 lb./cu.ft.
7.	Volume of test hole (Item 5 ÷ Item 6)	.058 cu. ft.
8.	Weight of moist soil from hole plus tare	5.24 lb.
9.	Weight of tare	.10 lb.
10.	Weight of moist soil (Item 8 minus Item 9)	5.14 lb.
11.	Wet Density $\frac{\text{Item 10}}{\text{Item 7}}$	89.1 lb./cu.ft.

FIELD DENSITY TEST - SAND CONE METHOD

Sand Cone Apparatus No. _____ Date of Test _____ Test No. _____

Method of Compaction _____ Test Location _____

Type of Compactor _____ Area Represented _____

Number of Passes _____ Material _____

Inspector _____ Layer Designation _____

Thickness _____

1.	Weight of apparatus filled with sand	_____ lb.
2.	Weight of apparatus and remaining sand	_____ lb.
3.	Weight of sand in hole and cone (Item 1 minus Item 2)	_____ lb.
4.	Weight of sand in cone	_____ lb.
5.	Weight of sand in hole (Item 3 minus Item 4)	_____ lb.
6.	Bulk density of sand	_____ lb./cu.ft.
7.	Volume of test hole (Item 5 ÷ Item 6)	_____ cu. ft.
8.	Weight of moist soil from hole plus tare	_____ lb.
9.	Weight of tare	_____ lb.
10.	Weight of moist soil (Item 8 minus Item 9)	_____ lb.

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 5/26/17 Time:1000 hrs.

Weather Conditions:Cloudy/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

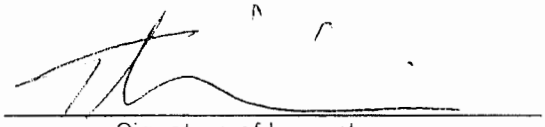
OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
X			15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:No density testing due to closure construction.

Leak Detection Flow= **14742 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:**5/15/17-5/25/17**

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:**5/4/17** SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:**8.0** Fe-T:**0.2** Mn-T:**<0.02** Zn-T:**<0.01**

NH3: As-T: TSS: Se-T:**N/A**

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:**5/15/17**

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:**5/15/17 @ 0800 HRS.**
FIELD PH:**8.3**
END DATE & TIME:**5/25/17 @ 1200 HRS.**
FIELD PH:**8.0**

SITE OPERATOR(S):TMS GALLONS DISCHARGED:**2218007**

OF DAYS OF DISCHARGE:**11**
MAXIMUM GALLONS PER DAY:**201637**
AVERAGE GALLONS PER DAY:**201637**
FLOW RATE FOR RECEIVING BODY OF WATER:**N/A**
COMPOSITE SAMPLE START:**5/15/17 @ 1100 HRS.**
COMPOSITE SAMPLE END:**5/16/17 @ 1030 HRS.**

COMMENTS:Summary of weekly pH's:5/19=8.2

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)2.6 x (D)0.4 x (W)0.3 x 7.48 x 60 x 60 x 24= 201637 GPD

5/26/17

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 6/30/17 Time:1200 hrs.

Weather Conditions:Sunny/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

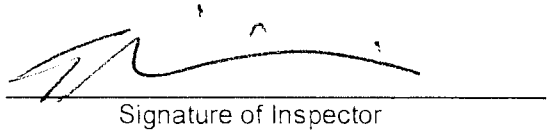
OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
X			15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:84 lbs./cu.ft.

Leak Detection Flow= **5707 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:6/19/17-6/29/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:5/25/17 SAMPLE TYPE:GRAB SAMPLER:TMS

FIELD PH:8.0 Fe-T:0.2 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:6/19/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:6/19/17 @ 1000 HRS.
FIELD PH:7.9
END DATE & TIME:6/30/17 @ 1200 HRS.
FIELD PH:7.9

SITE OPERATOR(S):TMS GALLONS DISCHARGED:4591116

OF DAYS OF DISCHARGE:12
MAXIMUM GALLONS PER DAY:382593
AVERAGE GALLONS PER DAY:382493
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:6/19/17 @ 1100 HRS.
COMPOSITE SAMPLE END:6/20/17 @ 1100 HRS.

COMMENTS:Summary of weekly pH's:

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)3.7 x (D)0.4 x (W)0.4 x 7.48 x 60 x 60 x 24= 382593 GPD

FIELD DENSITY TEST - SAND CONE METHOD

Sand Cone Apparatus No. _____ Date of Test 6/21/17 Test No. _____

Method of Compaction V.b. roller Test Location Cayuga Ash Landfill

Type of Compactor _____ Area Represented _____

Number of Passes 2-4 Material Cayuga Flyash

Inspector T. Sicak / Davis Layer Designation _____

Thickness 6-8"

1.	Weight of apparatus filled with sand	13.52 lb.
2.	Weight of apparatus and remaining sand	2.60 lb.
3.	Weight of sand in hole and cone (Item 1 minus Item 2)	10.90 lb.
4.	Weight of sand in cone	3.53 lb.
5.	Weight of sand in hole (Item 3 minus Item 4)	7.37 lb.
6.	Bulk density of sand	91.3 lb./cu.ft.
7.	Volume of test hole (Item 5 ÷ Item 6)	0.81 cu. ft.
8.	Weight of moist soil from hole plus tare	6.88 lb.
9.	Weight of tare	.10 lb.
10.	Weight of moist soil (Item 8 minus Item 9)	6.78 lb.
11.	Wet Density $\frac{\text{Item 10}}{\text{Item 7}}$	84 lb./cu.ft.

FIELD DENSITY TEST - SAND CONE METHOD

Sand Cone Apparatus No. _____ Date of Test _____ Test No. _____

Method of Compaction _____ Test Location _____

Type of Compactor _____ Area Represented _____

Number of Passes _____ Material _____

Inspector _____ Layer Designation _____

Thickness _____

1.	Weight of apparatus filled with sand	lb.
2.	Weight of apparatus and remaining sand	lb.
3.	Weight of sand in hole and cone (Item 1 minus Item 2)	lb.
4.	Weight of sand in cone	lb.
5.	Weight of sand in hole (Item 3 minus Item 4)	lb.
6.	Bulk density of sand	lb./cu.ft.
7.	Volume of test hole (Item 5 ÷ Item 6)	cu. ft.
8.	Weight of moist soil from hole plus tare	lb.
9.	Weight of tare	lb.
10.	Weight of moist soil (Item 8 minus Item 9)	lb.

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 7/28/17 Time:1400 hrs.

Weather Conditions:Sunny/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
		X	10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

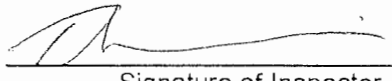
OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
	X		15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.The road from the TSS basin down to the discharge manhole needs to be graded.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:No testing conducted.
There was one day of overflow from the sedimentation pond during the permitted discharge that ran from 7/13-7/21.The estimated volume of the overflow was 1,290,000 gallons

Leak Detection Flow= **47167 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: CAYUGA ASH LANDFILL

DATE:7/13/17-7/21/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:6/30/17 SAMPLE TYPE:GRAB SAMPLER:TMS

FIELD PH:7.9 Fe-T:0.1 Mn-T:<0.02 Zn-T:<0.01

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:Tom Sienkiewicz DATE:7/13/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:7/13/17 @ 1400 HRS.
FIELD PH:8.1
END DATE & TIME:7/21/17 @ 2400 HRS.
FIELD PH:7.9

SITE OPERATOR(S):TMS GALLONS DISCHARGED:1566561

OF DAYS OF DISCHARGE:9
MAXIMUM GALLONS PER DAY:382593
AVERAGE GALLONS PER DAY:174062
FLOW RATE FOR RECEIVING BODY OF WATER:N/A
COMPOSITE SAMPLE START:7/13/17 @ 1530 HRS.
COMPOSITE SAMPLE END:7/14/17 @ 1300 HRS.

COMMENTS:Summary of weekly pH's:

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)3.7 x (D)0.4 x (W)0.4 x 7.48 x 60 x 60 x 24= 382593 GPD(3days)
(V)1.8 x (D)0.3 x (W)0.2 x 7.48 x 60 x 60 x 24=69797 GPD (6days)
There was one day of overflowestimated at 1,290,000 gallons.

7/21/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:**7/23/17-8/4/17**

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:**7/20/17** SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:**7.9** Fe-T:**0.4** Mn-T:**<0.02** Zn-T:**<0.01**

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:**7/23/17**

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE & TIME:**7/23/17 @ 1000 HRS.**
FIELD PH:**8.0**
END DATE & TIME:**8/4/17 @ 2400 HRS.**
FIELD PH:**7.9**

SITE OPERATOR(S):TMS GALLONS DISCHARGED:**4034675**

OF DAYS OF DISCHARGE:**13**
MAXIMUM GALLONS PER DAY:**662429**
AVERAGE GALLONS PER DAY:**310360**
FLOW RATE FOR RECEIVING BODY OF WATER:**N/A**
COMPOSITE SAMPLE START:**7/24/17 @ 1100 HRS.**
COMPOSITE SAMPLE END:**7/25/17 @ 1300 HRS.**

COMMENTS:Summary of weekly pH's:8/2=7.9

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER

(V)4.1 x (D)0.5 x (W)0.5 x 7.48 x 60 x 60 x 24= 662429 GPD(3days)
(V)3.8 x (D)0.4 x (W)0.3 x 7.48 x 60 x 60 x 24=294700 GPD (6days)
(V)1.8 x (D)0.3 x (W)0.2 x 7.48 x 60 x 60 x 24=69797 GPD (4days)


8/4/17

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 8/31/17 Time:1100 hrs.

Weather Conditions:Cloudy/Rain

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

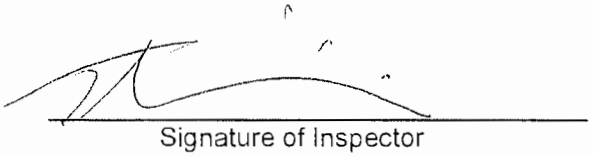
OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
	X		15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:No testing conducted.

Leak Detection Flow= **1100 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 9/29/17 Time:1100 hrs.

Weather Conditions:Sunny/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

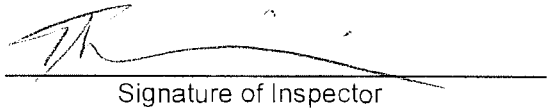
OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
X			15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:Cayuga Fly Ash = 88.3 lbs./cu.ft.

Leak Detection Flow= **0 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:**8/31/17-9/13/17**

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:**8/4/17** SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:**7.9** Fe-T:**0.1** Mn-T:**0.02** Zn-T:**<0.01**

NH3: As-T: TSS: Se-T:N/A

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:**8/31/17**

OTHER DIRECTION:
POND DISCHARGE INFORMATION

START DATE & TIME:**8/31/17 @ 1100 HRS.**
FIELD PH:**8.5**
END DATE & TIME:**9/13/17 @ 1600 HRS.**
FIELD PH:**7.8**

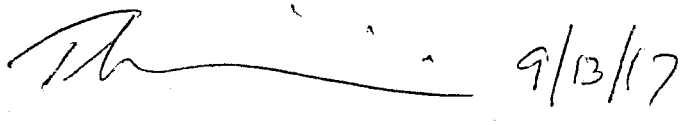
SITE OPERATOR(S):TMS GALLONS DISCHARGED:**1487909**

OF DAYS OF DISCHARGE:**14**
MAXIMUM GALLONS PER DAY:**209392**
AVERAGE GALLONS PER DAY:**106279**
FLOW RATE FOR RECEIVING BODY OF WATER:**N/A**
COMPOSITE SAMPLE START:**8/31/17 @ 1100 HRS.**
COMPOSITE SAMPLE END:**9/1/17 @ 1020 HRS.**

COMMENTS:Summary of weekly pH's:**9/7/17 = 7.8**

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER AND GRADUATED BEAKER

(V)2.7 x (D)0.4 x (W)0.3 x 7.48 x 60 x 60 x 24=209392 GPD(6days)
(V)1.5 x (D)0.2 x (W)0.3 x 7.48 x 60 x 60 x 24=58164 GPD (3days)
GRADUATED BEAKER:30liters/min x .2642 x 60 x 24=11413 GPD (5days)


9/13/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:**9/18/17-9/29/17**

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:**9/12/17** SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:**7.8** Fe-T:**<0.01** Mn-T:**<0.02** Zn-T:**<0.01**

NH3: As-T: TSS: Se-T:

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:**9/18/17**

OTHER DIRECTION:
POND DISCHARGE INFORMATION

START DATE & TIME:**9/18/17 @ 0830 HRS.**
FIELD PH:**7.8**
END DATE & TIME:**9/29/17 @ 1200 HRS.**
FIELD PH:**7.9**

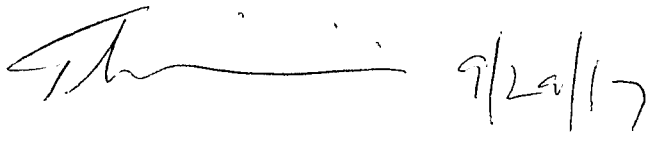
SITE OPERATOR(S):TMS GALLONS DISCHARGED:**438165**

OF DAYS OF DISCHARGE:**12**
MAXIMUM GALLONS PER DAY:**77553**
AVERAGE GALLONS PER DAY:**36514**
FLOW RATE FOR RECEIVING BODY OF WATER:**N/A**
COMPOSITE SAMPLE START:**9/18/17 @ 1000 HRS.**
COMPOSITE SAMPLE END:**9/19/17 @ 1000 HRS.**

COMMENTS:Summary of weekly pH's:**N/A**

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER AND GRADUATED BEAKER

(V)2.0 x (D)0.2 x (W)0.3 x 7.48 x 60 x 60 x 24=77553
GPD(5days)387765gal.
GRADUATED BEAKER:5GAL/min x 60 x 24=7200 GPD (7days)50400 gal.



FIELD DENSITY TEST - SAND CONE METHOD

Sand Cone Apparatus No. ________ Date of Test 9/29/17 Test No. ________

Method of Compaction Vib - roller Test Location Cayuga Ash Landfill

Type of Compactor ________ Area Represented ________

Number of Passes 2-4 Material Cayuga Fly Ash

Inspector T. Siemiginowski Layer Designation ________

Thickness 6-8"

1. Weight of apparatus filled with sand 13.40 lb.
2. Weight of apparatus and remaining sand 3.97 lb.
3. Weight of sand in hole and cone (Item 1 minus Item 2) 9.43 lb.
4. Weight of sand in cone 3.53 lb.
5. Weight of sand in hole (Item 3 minus Item 4) 5.90 lb.
6. Bulk density of sand 91.3 lb./cu.ft.
7. Volume of test hole (Item 5 + Item 6) .065 cu. ft.
8. Weight of moist soil from hole plus tare 5.84 lb.
9. Weight of tare .10 lb.
10. Weight of moist soil (Item 8 minus Item 9) 5.74 lb.
11. Wet Density $\frac{\text{Item 10}}{\text{Item 7}}$ 88.3 lb./cu.ft.

FIELD DENSITY TEST - SAND CONE METHOD

Sand Cone Apparatus No. ________ Date of Test ________ Test No. ________

Method of Compaction ________ Test Location ________

Type of Compactor ________ Area Represented ________

Number of Passes ________ Material ________

Inspector ________ Layer Designation ________

Thickness ________

1. Weight of apparatus filled with sand ________ lb.
2. Weight of apparatus and remaining sand ________ lb.
3. Weight of sand in hole and cone (Item 1 minus Item 2) ________ lb.
4. Weight of sand in cone ________ lb.
5. Weight of sand in hole (Item 3 minus Item 4) ________ lb.
6. Bulk density of sand ________ lb./cu.ft.
7. Volume of test hole (Item 5 + Item 6) ________ cu. ft.
8. Weight of moist soil from hole plus tare ________ lb.
9. Weight of tare ________ lb.
10. Weight of moist soil (Item 8 minus Item 9) ________ lb.

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 10/31/17 Time:1000 hrs.

Weather Conditions:Cloudy/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
X			15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:No ash brought to site

Leak Detection Flow= **11794 gallons/month**

Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 11/29/17 Time:0800 hrs.

Weather Conditions:Sunny/Dry

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas)

MONITORING

X			12. Monitoring wells are intact.

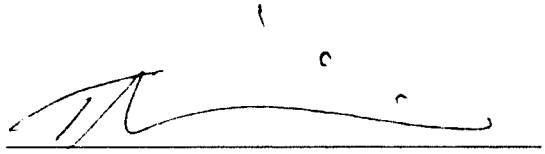
OTHER

X			13. All required equipment is on-site and operational.
	X		14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
	X		15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:No ash brought to site

Leak Detection Flow= **14837 gallons/month**



Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:**10/30/17-11/12/17**

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:**9/29/17** SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:**8.5(10/25)** Fe-T:**<0.05** Mn-T:**<0.02** Zn-T:**<0.01**

NH3: As-T: TSS: Se-T:

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:**10/30/17**

OTHER DIRECTION:
POND DISCHARGE INFORMATION

START DATE & TIME:**10/30/17 @ 0001 HRS.**
FIELD PH:**7.9**
END DATE & TIME:**11/12/17 @ 2400 HRS.**
FIELD PH:**8.1**

SITE OPERATOR(S):TMS GALLONS DISCHARGED:**2714348**

OF DAYS OF DISCHARGE:**14**
MAXIMUM GALLONS PER DAY:**193882**
AVERAGE GALLONS PER DAY:**193882**
FLOW RATE FOR RECEIVING BODY OF WATER:**N/A**
COMPOSITE SAMPLE START:**10/31/17 @ 0930 HRS.**
COMPOSITE SAMPLE END:**11/1/17 @ 0905 HRS.**

COMMENTS:Summary of weekly pH's:**11/6 = 8.0**

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER AND GRADUATED BEAKER

(V)2.5 x (D)0.3 x (W)0.4 x 7.48 x 60 x 60 x 24=193882 GPD

11/29/17

CAYUGA OPERATING COMPANY/ ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **CAYUGA ASH LANDFILL**

DATE:**11/13/17-11/22/17**

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE:**11/9/17** SAMPLE TYPE:**GRAB** SAMPLER:**TMS**

FIELD PH:**8.1** Fe-T:**0.1** Mn-T:**<0.02** Zn-T:<**0.01**

NH3: As-T: TSS: Se-T:

AUTHORIZATION TO DRAIN POND

NAME:**Tom Sienkiewicz** DATE:**11/13/17**

OTHER DIRECTION:
POND DISCHARGE INFORMATION

START DATE & TIME:**11/13/17 @ 0001 HRS.**
FIELD PH:**8.3**
END DATE & TIME:**11/22/17 @ 1500 HRS.**
FIELD PH:**8.2**

SITE OPERATOR(S):TMS GALLONS DISCHARGED:**1221450**

OF DAYS OF DISCHARGE:**10**
MAXIMUM GALLONS PER DAY:**122145**
AVERAGE GALLONS PER DAY:**122145**
FLOW RATE FOR RECEIVING BODY OF WATER:**N/A**
COMPOSITE SAMPLE START:**11/13/17 @ 0900 HRS.**
COMPOSITE SAMPLE END:**11/14/17 @ 0900 HRS.**

COMMENTS:Summary of weekly pH's:**11/17 = 8.2**

STAFF GAUGE IN POND NO LONGER EXISTS.FLOW BEING CALCULATED USING A MARSH MCBIRNEY MODEL 2000 MAGNETIC FLOW METER AND GRADUATED BEAKER

(V)2.1 x (D)0.3 x (W)0.3 x 7.48 x 60 x 60 x 24=122145 GPD

11/29/17

CAYUGA OPERATING COMPANY ASH LANDFILL
MONTHLY ASH SITE INSPECTION

Inspector: Tom Sienkiewicz/ Cayuga Operating Company/ 607-533-7913 EXT.2206

Date of Inspection: 12/27/17 Time:0900 hrs.

Weather Conditions:Cloudy/Snow

OK = Condition Met NO = Not Observed CA = Corrective Action Required
NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	
			FACILITY MANAGEMENT
X			1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, compaction tests and monthly inspection records).
X			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			3. Dust is effectively controlled and does not constitute an off-site nuisance.
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, signs, locks or other suitable means.
X			10. Access roads are passable.

Milliken Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X			11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

MONITORING

X			12. Monitoring wells are intact.

OTHER

X			13. All required equipment is on-site and operational.
X			14. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
	X		15. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
X			16. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s) The discharge vault is leaking at the end of the pond platform.

OTHER COMMENTS:
(Include compaction test dates and results, any known complaints, incidents or violations)
In place density: Cayuga fly ash:

Leak Detection Flow= **5900 gallons/month**
There was no pond discharge this month.

Signature of Inspector

cc: Jeff Lamphere/Fred DelFavero
Cayuga Operating Company

FINANCIAL ASSURANCE DOCUMENTS

SURETY RIDER

To be attached to and form a part of

Bond No. 800000040

dated effective 8/24/2016
(MONTH-DAY-YEAR)

executed by Cayuga Operating Company, LLC , as Principal,
(PRINCIPAL)

and by Atlantic Specialty Insurance Company , as Surety,

in favor of NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
(OBLIGEE)

in consideration of the mutual agreements herein contained the Principal and the Surety hereby consent to changing

The Bond Amount to:

Seven Million Eight Hundred Ninety-two Thousand And No/100 ($7,892,000.00)

Nothing herein contained shall vary, alter or extend any provision or condition of this bond except as herein expressly stated.

This rider is effective 11/8/2016
(MONTH-DAY-YEAR)

Signed and Sealed 11/10/2016
(MONTH-DAY-YEAR)

Cayuga Operating Company, LLC
(PRINCIPAL)

By: J. Halliday Chief Financial Officer.
(PRINCIPAL)

Atlantic Specialty Insurance Company
(SURETY)

By:
Cori Riddle, Attorney-in-Fact

S-0443/GEEF 10/99

OneBeacon
INSURANCE GROUP

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Francis J. Curran, Marina A. Kenney, Sally J Phillips, Cori Riddle**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **sixty million dollars ($60,000,000)** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this eighth day of December, 2014.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

By _____
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

On this eighth day of December, 2014, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.

TARA JANELLE STAFFORD
NOTARY PUBLIC - MINNESOTA
My Commission Expires
January 31, 2020

_____
Notary Public

I, the undersigned, Assistant Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 10th day of November 2014.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

This Power of Attorney expires
October 1, 2017

_____
James G. Jordan, Assistant Secretary

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Materials Management, Region 7
615 Erie Boulevard West, Syracuse, NY 13204-2400
P: (315) 426-7419 F: (315) 426-7487
www.dec.ny.gov

November 8, 2016

Mr. Jeffrey Lamphere, P.E.
Environmental Engineering & Compliance Manager
Cayuga Operating Company
228 Cayuga Drive
Lansing, New York 14882

Re: Cayuga Operating Company Ash Landfill
2016 Financial Assurance Update

Dear Mr. Lamphere:

The Department received the updated financial assurance assessment for closure and post-closure care of the above referenced facility, dated October 19, 2016. This assessment presents an increase of $0.383M from $7.509M to $7.892M and reflects the additional area of the existing landfill that will be utilized.

This assessment is hereby approved. Please submit a revised Surety Bond for this new amount. Should you have any additional questions or concerns, please call me at (315) 426-7414 or Jaime Lang at (518) 402-8678.

Sincerely

James Gruppe, P.E.
Environmental Engineer 2

ec: Tom Annal DMM – R7
Elizabeth Gondeck DMM – R7
Jaime Lang DMM-Central Office

X:\DMM\MATRIX\Region 7\SW- Facilities\55 Tompkins Co\USNYPP Cayuga Operating Company 55N02:55N02_Heorot_Cayuga_Operating_Co_2016_FA_Approval.2016-11-08.Letter.pdf

HEOROT
POWER

October 19, 2016

Mr. James E. Gruppe, PE
Division of Solid and Hazardous Materials
New York State Department of Environmental Conservation
Region 7
615 Erie Blvd West
Syracuse NY 13204-2400

Re: Cayuga Operating Company (Cayuga) Ash Landfill Site
Part 360- 2.19 Financial Assurance
Facility ID# Y55S02

Dear Mr. Gruppe:

Please find the enclosed Financial Assurance cost estimate done in accordance with Part 360-2.19. The *site closure cost estimate* summarizes the cost to fully cap the existing exposed active landfill space at the Cayuga Ash Landfill Site. This area is approximately 5.27 acres total. This cost estimate also includes costs associated with soil and seeding the current slope caps in place on the site. The total for these activities is approximately $1.346K (rounded up from Appendix A and C).

In addition, a cost analysis was done to estimate the costs associated with the *post closure cost* requirements. The requirements outlined are; *ground and surface water monitoring, leachate disposal, monthly site inspections, and repairs and maintenance of landfill structures* (see Appendix B). The estimated capital needed to meet the post-closure cost requirements is approximately $6.546M. Please note that this model assumes a 1.39% inflation rate (previously 2.205%) for contracted post closure services and a 3.03% annual interest rate (previously 3.94%) realized on allocated funds in the trust account.

Finally, a narrative is attached describing the methodology, assumptions, and references used in the model. Based on this analysis, Cayuga needs to amend the current insurance policy (currently funded with $7.509M) to reflect the updated amount of $7.892M (rounded up) which will cover the estimated amount outlined in the report to cover *closure costs* as well as *post-closure monitoring* for 30-years associated with the Cayuga landfill. This is an increase of approximately $385K (rounded up from $383K) from the 2015 amount posted.

Thank you for your assistance in this matter. If you have any questions or concerns, please contact me at 607-533-7913, ext. 2241 or jeff.lamphere@usnypp.com.

Sincerely,

Jeffrey D. Lamphere
Environmental Engineer/Compliance Manager

cc: Jamie Lang- NYSDEC Albany

enc.

2016 FINANCIAL ASSURANCE ASSESMENT
CAYUGA OPERATING COMPANY LANDFILL

HEOROT
POWER

Revised: October 19, 2016

YEAR 2016
CAYUGA OPERATING COMPANY
FINANCIAL ASSURANCE REPORT
Heorot Power, LLC
Lansing, New York

1.0 INTRODUCTION

Heorot Power, LLC (Heorot) owns and operates the Cayuga Operating Company (Cayuga) Ash Disposal Facility (Site) on the eastern shore of Cayuga Lake in the Town of Lansing, New York. This is the site of the former Milliken Station. The Site receives flyash, gypsum, and waste water treatment by-products from the Cayuga coal-fired generating station located west of the Site on the shore of Cayuga Lake and limited quantities of flyash from the heating plant at Cornell University.

1.1 PURPOSE

The former plant owner, AES, was issued a Permit to Operate (Permit) the Site (DEC Facility ID# Y55S02) under 6 NYCRR Part 360 regulations. This Permit was then transferred to Cayuga Operating Company. As a requirement of the permit, the Financial Assurance Evaluation is done in accordance with Part §360-2.19 regulations so financial assurance is in place to both close the active landfill sites and monitor post closure for a period of 30-years.

1.2 CLOSURE COST ESTIMATE

Cayuga now proposes to activate the Stage 2 active operational area as shown in the Fill Progression Plan from the 2012 Operation and Maintenance Report. Activation of this area will increase the operational area requiring Financial Assurance for closure to 5.27 acres while reducing the inactive area to 16.19 acres.

Cost Estimates for construction of the landfill's final cover system were based on actual bid prices for a final cover system project in 2013 at the USNYPP Cayuga landfill site. Costs for closure of the Slope Cap areas of the landfill (1986 Expansion western sideslope and the Phase I landfill) were derived from the "Topsoil" and the "Seeding and Mulching" line items of the 2010 Final Cover Project. The bid figures, which were based on a per-square-foot bid price were applied to the appropriate areas for these portions of the landfill which have slope cap systems already installed. Costs for closure of the approximately 5.27-acre active landfill in the Phase I

area are based on unit prices for composite and single-geomembrane final cover systems from the 2013 final cover project at the Cayuga landfill, and then applied to the applicable plateau and side slope areas. A flat ten percent (10%) of the construction costs estimate was added to the total for mobilization and bonds, and another fifteen percent (15%) was added for Engineering, permitting, and construction certification. Finally, a construction contingency was added into the estimate at a flat ten percent (10%) rate to account for any unforeseen items during construction activities (see Appendix A). All closure costs were then adjusted to 2016 dollars using the U.S. Department of Labor, Bureau of Labor Statistics Consumer Price Index (CPI) for the last 5-years (ending in September 2016) of 1.39%.

1.3 POST CLOSURE COST ESTIMATE

Post-Closure Costs generally fall within one of the following four categories:

- Ground and Surface Water Monitoring
- Leachate Disposal
- Monthly Site Inspections
- Repairs and Maintenance of Landfill Structures

An individual annual amount for each of these items listed above has been estimated in 2016 dollars. For the interest rate, Cayuga looked at the average US Treasury rates for the 30 year treasury bill for the last 5-years (ending in September 2016), which averaged 3.03% (See Appendix F).

For inflation, the CPI for the last 5-years (ending in September 2016) was used. This average rate for the 5-year period was 1.39% (See Appendix E).

Ground and Surface Water Monitoring

Post-Closure monitoring costs include costs for sampling and laboratory analysis plus costs for reporting and data validation for each of the quarterly data summaries, and the annual report. Sampling and laboratory analysis are performed by the Cayuga Creative Resources Group and Adirondack Laboratories for a current annual cost of $232,000. This cost also includes the

monitoring and discharging of the leachate collection system as well as contingency monitoring. Quarterly and Annual data reporting, currently done by Geomatrix, costs approximately $18,000 per year.

There are a total of 45 wells monitored quarterly, 29 wells are associated with the Phase I landfill and 16 with the Phase II landfill. There are also 14 sample locations for the leachate collection, groundwater suppression and leak detection systems and one sample point for the leachate pond. Stream sampling includes two locations for surface water sampling and two locations for sediment sampling. This stream sampling is for contingency monitoring only, not part of the operational monitoring program.

Leachate Disposal

There are no additional costs to Cayuga associated with leachate disposal other than the monitoring and discharging of the retention pond which collects the leachate. For purposes of this report that amount was captured in the Annual Monitoring Cost section as those activities are all completed under an individual blanket contract with Cayuga's Creative Resources group. Of the $232K annual monitoring cost, $26K of it is for monitoring and discharge of the collection pond.

Monthly Site Inspection

Monthly Site Inspection costs are based on one day per month visit by a qualified person to inspect all features of the approximately 35 acres of solid waste plus supporting facilities such as the sediment pond and erosion and sediment control structures for verification of proper function. Also, if any site features are not functioning properly, the inspector will be required to coordinate with the Owner to provide mitigation of the problem as required. A site inspection log will also be maintained. The current cost for this program is $6,000 per year in 2016 dollars as verified by the Cayuga Creative Resources Group.

Repairs and Maintenance of Landfill Structures

Maintenance of the landfill includes but is not limited to annual flushing of leachate lines, mowing of ground cover, cleaning of stormwater management structures and plowing snow. Repairs could include a wide variety of work, including erosion repair, replacement of unhealthy ground cover, repair of leachate or storm water management structures, and repair of any unforeseen problems. Maintenance of the landfill structures is estimated at $15,000 per year.

HEDROT
POWER

TABLE OF CONTENTS

APPENDICES

Appendix A

Cayuga Operating Company

Ash Disposal Site

Closure Cost Analysis Calculations for Capping and Closing Active Sites

BY DLA DATE 10/9/2012

CKD BY _____ DATE _____

FAGAN ENGINEERS
113 East Chemung Place
Elmira, New York 14904

SHEET NO 1 OF 2

JOB NO 2012-0[illegible]

SUBJECT Hexcot - [illegible] Ash Disposal Site

Closure Cost Estimate

Area Summary - Phase I Existing & Inactive Units Active
Phase II Inactive & Closed

1. Composite Final Cover System -	3.83 Acres
2. Geomembrane Final Cover System -	4.41 Acres
3. Inactive Phase I & Phase II	16.19 Acres

Cost Summary

1. Composite Final Cover System	$187,505.47
2. Geomembrane Final Cover System	$642,712.67
3. Inactive Areas Final Cover System	$148,630.24
Subtotal Construction	$978,848.38
Mobilization & Bonds @ 10%	97,884.84
Engineering, Permitting & Certification @ 15%	146,827.26
Subtotal	$1,223,560.47
Contingency @ 10%	122,356.05
TOTAL	$1,345,916.53

BY DLA DATE 9-19-2013 CKD. BY ____ DATE ____	**FAGAN ENGINEERS** 113 East Chemung Place Elmira, New York 14904	SHEET NO [illegible] OF 2 JOB NO [illegible]

SUBJECT Hakes - Closure Act [illegible]

1. Composite Final Cover System (*)

Final Cover $4.22 /sf
Seeding & mulching 0.07 /sf
$4.29 / sf

$4.29/sf * (1+0.0139)^3 * 43,560 sf/Ac * 0.86 Ac = $187,505.47

2. Geomembrane Final Cover System (*)

Final Cover [illegible]
Seeding & mulching 0.07 [illegible]
[illegible]

[illegible] * (1+0.0139)^3 * [illegible] * [illegible] = $[illegible]

3. Inactive Areas (* *)

Topsoil $0.138 /sf
Seeding & mulching $0.056 /sf
$0.194 /sf

$0.194/sf * (1+0.0139)^6 * 43560 sf/Ac * 16.19 Ac = $148,630.24

* Unit Costs obtained from Actual 2013 Final Cover Project Bids

* * Unit Costs [illegible] Final Cover Project [illegible]

Appendix B

Cayuga Operating Company

Ash Disposal Site Post Closure Cost Analysis

Cayuga Operating Company Ash Disposal Site
Post-Closure Cost Analysis

Year	Monitoring	Monthly Inspections	Repair and Maintenance	Total Annual Cost	Fund Balance
2016	232,000.00	6,000.00	15,000.00	$253,000.00	$6,546,000.00
2017	258,747.28	6,083.40	15,208.50	$280,039.18	$6,455,819.43
2018	262,343.87	6,167.96	15,419.90	$283,931.72	$6,358,895.91
2019	265,990.45	6,253.69	15,634.23	$287,878.38	$6,254,969.36
2020	269,687.71	6,340.62	15,851.55	$291,879.88	$6,143,771.09
2021	273,436.37	6,428.75	16,071.89	$295,937.02	$6,025,023.44
2022	277,237.14	6,518.11	16,295.29	$300,050.54	$5,898,439.58
2023	281,090.74	6,608.72	16,521.79	$304,221.24	$5,763,723.16
2024	284,997.90	6,700.58	16,751.44	$308,449.92	$5,620,568.02
2025	288,959.37	6,793.72	16,984.29	$312,737.37	$5,468,657.92
2026	292,975.90	6,888.15	17,220.37	$317,084.42	$5,307,666.17
2027	297,048.27	6,983.89	17,459.73	$321,491.89	$5,137,255.36
2028	301,177.24	7,080.97	17,702.42	$325,960.63	$4,957,076.96
2029	305,363.60	7,179.40	17,948.49	$330,491.48	$4,766,771.01
2030	309,608.16	7,279.19	18,197.97	$335,085.32	$4,565,965.77
2031	313,911.71	7,380.37	18,450.92	$339,743.00	$4,354,277.32
2032	318,275.08	7,482.96	18,707.39	$344,465.43	$4,131,309.19
2033	322,699.11	7,586.97	18,967.42	$349,253.50	$3,896,651.98
2034	327,184.62	7,692.43	19,231.07	$354,108.12	$3,649,882.93
2035	331,732.49	7,799.35	19,498.38	$359,030.23	$3,390,565.54
2036	336,343.57	7,907.76	19,769.41	$364,020.75	$3,118,249.11
2037	341,018.75	8,017.68	20,044.21	$369,080.63	$2,832,468.28
2038	345,758.91	8,129.13	20,322.82	$374,210.86	$2,532,742.62
2039	350,564.96	8,242.12	20,605.31	$379,412.39	$2,218,576.14
2040	355,437.81	8,356.69	20,891.72	$384,686.22	$1,889,456.79
2041	360,378.39	8,472.85	21,182.12	$390,033.36	$1,544,855.96
2042	365,387.65	8,590.62	21,476.55	$395,454.82	$1,184,228.00
2043	370,466.54	8,710.03	21,775.07	$400,951.64	$807,009.63
2044	375,616.03	8,831.10	22,077.74	$406,524.87	$412,619.44
2045	380,837.09	8,953.85	22,384.63	$412,175.57	$457.33
Total				**$10,171,390.38**	

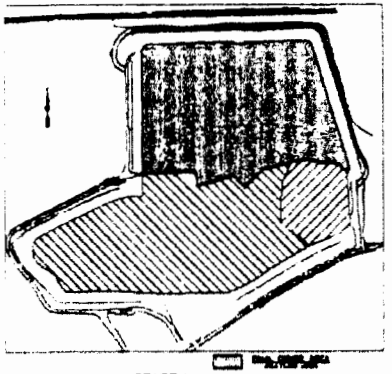
Notes:	Assumes Current Year of	2016	
	Assumes Landfill Post-Closure Commences in	2016	
	Assumes an Annual Inflation Rate (CPI) of	1.39%	
	Assumes an Annual Interest Rate of	3.03%	
	Assumes an Initial Monitoring Cost of	$232,000.00	(2016 Dollars)
	Assumes an Additional Contingency Cost for Monitoring of	10.00%	
	Assumes an Annual Cost for Monthly Inspections of	$6,000.00	(2016 Dollars)
	Assumes an Annual Cost for Repair and Maintenance of	$15,000.00	(2016 Dollars)

Appendix C

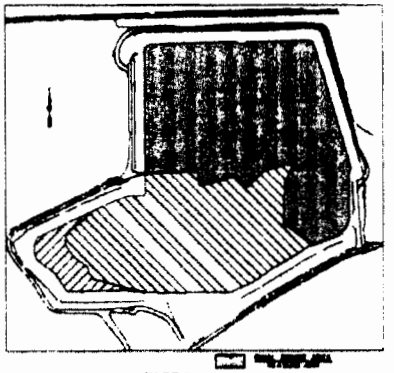
Cayuga Operating Company

Ash Disposal Site

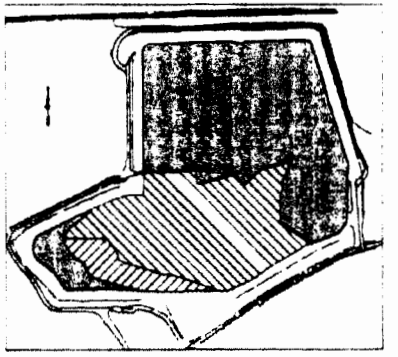
Site Fill Progression Drawing



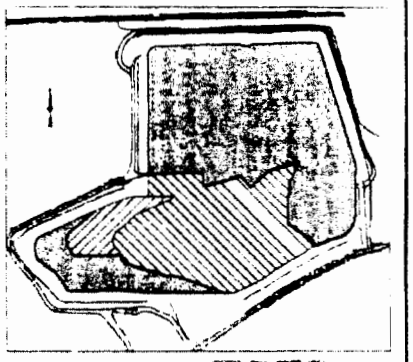
STAGE 1



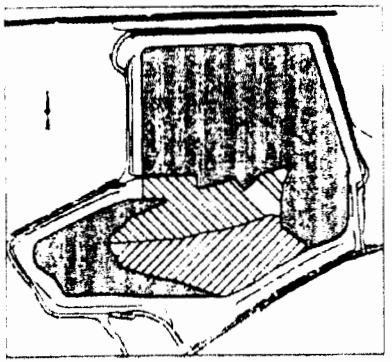
STAGE 2



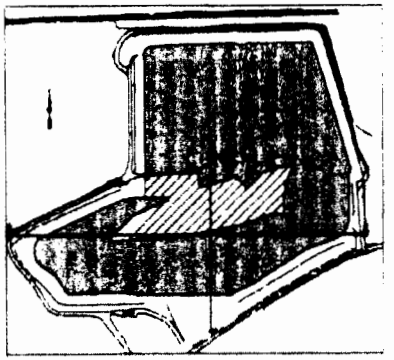
STAGE 3



STAGE 4



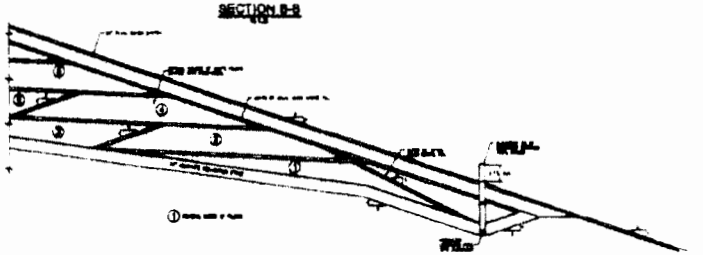
STAGE 5



STAGE 6

SECTION A-A

SECTION B-B



DETAILED FILL PROGRESSION

USNYPP
PHASE 1
ASH DISPOSAL LANDFILL
PART 360 PERMIT MODIFICATION APPLICATION
OPERATION AND MAINTENANCE REPORT
NOVEMBER 2012

FIGURE 1

GENERAL FILL PROGRESSION

NTS

FAGAN ENGINEERS
Environmental Consultants
FILE: 132-044X FILL PROGRESSION FIGURE 1.DWG

Appendix D

Cayuga Operating Company

Bid Package Numbers Referenced for Capital Closure Cost Calculations (from Previous Final Cover Project at Cayuga)

CONTINUATION SHEET

Project: 2007 Expansion/ 2013 Final Cover Construction

APPLICATION NUMBER: Three
APPLICATION DATE: 7/8/2013
PERIOD TO:
PROJECT NO:

Item No	Description	Quantity	Units	Unit Price	Total Price	Work Completed				Materials Stored	Total Completed & Stored	Percent Complete	Balance to Finish
						Previous Period		This Period					
						Quantity	Amount	Quantity	Amount				
1	Mobilization/Demobilization	1	LS	$ 21,000.00	$ 21,000.00	100%	$ 21,000.00	0%	$ -		$ 21,000.00	100%	$ -
2	Subbase Preparation	1	LS	$ 22,000.00	$ 22,000.00	100%	$ 22,000.00	0%	$ -		$ 22,000.00	100%	$ -
3	Composite Final Cover System	137,080	SF	$ 4.22	$ 578,383.20	137080	$578,383.20	0	$ -		$ 578,383.20	100%	$ -
4	Geomembrane Final Cover System	12,000	SF	$ 3.14	$ 37,680.00	12000	$ 37,680.00	0	$ -		$ 37,680.00	100%	$ -
5	Seeding and Mulching	149,080	SF	$ 0.07	$ 10,434.20	149080	$ 10,434.20	0	$ -		$ 10,434.20	100%	$ -
6	Miscellaneous Site Work	1	LS	$ 105,492.80	$ 105,492.80	100%	$105,492.80	0%	$ -		$ 105,492.80	100%	$ -
	Total				$ 776,000.00		$776,000.00		$ -	$ -	$ 776,000.00	100.00%	$ -
7	Extra Work - ACBE	1	LS	$ 10,564.67	$ 10,564.67	100%	$ 10,564.67	0%	$ -		$ 10,564.67	100%	$ -
	Total				$ 786,564.67		$786,564.67		$ -	$ -	$ 786,564.67	100.00%	$ -

Appendix E

Cayuga Operating Company
Copy of CPI & 30-year Bond Rate Look Back for Last 5-Years

Historical Inflation Rates - 5 Yr Look Back

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2000	2.7	3.2	3.8	3.1	3.2	3.7	3.7	3.4	3.5	3.4	3.4	3.4	3.4
2001	3.7	3.5	2.9	3.3	3.6	3.2	2.7	2.7	2.6	2.1	1.9	1.6	2.8
2002	1.1	1.1	1.5	1.6	1.2	1.1	1.5	1.8	1.5	2	2.2	2.4	1.6
2003	2.6	3	3	2.2	2.1	2.1	2.1	2.2	2.3	2	1.8	1.9	2.3
2004	1.9	1.7	1.7	2.3	3.1	3.3	3	2.7	2.5	3.2	3.5	3.3	2.7
2005	3	3	3.1	3.5	2.8	2.5	3.2	3.6	4.7	4.3	3.5	3.4	3.4
2006	4	3.6	3.4	3.5	4.2	4.3	4.1	3.8	2.1	1.3	2	2.5	3.2
2007	2.1	2.4	2.8	2.6	2.7	2.7	2.4	2	2.8	3.5	4.3	4.1	2.8
2008	4.3	4	4	3.9	4.2	5	5.6	5.4	4.9	3.7	1.1	0.1	3.8
2009	0	0.2	-0.4	-0.7	-1.3	-1.4	-2.1	-1.5	-1.3	-0.2	1.8	2.7	-0.4
2010	2.6	2.1	2.3	2.2	2	1.1	1.2	1.1	1.1	1.2	1.1	1.5	1.6
2011	1.6	2.1	2.7	3.2	3.6	3.6	3.6	3.8	3.9	3.5	3.4	3	3.2
2012	2.9	2.9	2.7	2.3	1.7	1.7	1.4	1.7	2	2.2	1.8	1.7	2.1
2013	1.6	2	1.5	1.1	1.4	1.8	2	1.5	1.2	1	1.2	1.5	1.5
2014	1.6	1.1	1.5	2	2.1	2.1	2	1.7	1.7	1.7	1.3	0.8	1.6
2015	-0.1	0	-0.1	-0.2	0	0.1	0.2	0.2	0	0.2	0.5	0.7	0.1
2016	1.4	1	0.9	1.1	1	1	0.8	1.1	1.5				

Total Rates	**83.60**
Total Months	**60**
5 Year Average	**1.39**

30 Year treasury Bond - 5 Yr Look back

Month	Rate	Factor		Percentage
1-Oct-16	0.0247	100		2.47
1-Sep-16	0.0235	100		2.35
1-Aug-16	0.0226	100		2.26
1-Jul-16	0.0223	100		2.23
1-Jun-16	0.0245	100		2.45
1-May-16	0.0263	100		2.63
1-Apr-16	0.0262	100		2.62
1-Mar-16	0.0268	100		2.68
1-Feb-16	0.0262	100		2.62
1-Jan-16	0.0286	100		2.86
1-Dec-15	0.0297	100		2.97
1-Nov-15	0.0303	100		3.03
1-Oct-15	0.0289	100		2.89
1-Sep-15	0.0295	100		2.95
1-Aug-15	0.0286	100		2.86
1-Jul-15	0.0307	100		3.07
1-Jun-15	0.0311	100		3.11
1-May-15	0.0296	100		2.96
1-Apr-15	0.0259	100		2.59
1-Mar-15	0.0263	100		2.63
1-Feb-15	0.0256	100		2.56
1-Jan-15	0.0246	100		2.46
1-Dec-14	0.0283	100		2.83
1-Nov-14	0.0305	100		3.05
1-Oct-14	0.0304	100		3.04
1-Sep-14	0.0326	100		3.26
1-Aug-14	0.0321	100		3.21
1-Jul-14	0.0333	100		3.33
1-Jun-14	0.0342	100		3.42
1-May-14	0.0339	100		3.39
1-Apr-14	0.0352	100		3.52
1-Mar-14	0.0362	100		3.62
1-Feb-14	0.0366	100		3.66
1-Jan-14	0.0377	100		3.77
1-Dec-13	0.0389	100		3.89
1-Nov-13	0.0380	100		3.80
1-Oct-13	0.0368	100		3.68
1-Sep-13	0.0379	100		3.79
1-Aug-13	0.0376	100		3.76
1-Jul-13	0.0361	100		3.61
1-Jun-13	0.0340	100		3.40
1-May-13	0.0311	100		3.11
1-Apr-13	0.0293	100		2.93
1-Mar-13	0.0316	100		3.16
1-Feb-13	0.0317	100		3.17
1-Jan-13	0.0308	100		3.08
1-Dec-12	0.0288	100		2.88
1-Nov-12	0.0280	100		2.80
1-Oct-12	0.0290	100		2.90
1-Sep-12	0.0288	100		2.88
1-Aug-12	0.0277	100		2.77
1-Jul-12	0.0259	100		2.59
1-Jun-12	0.0270	100		2.70
1-May-12	0.0293	100		2.93
1-Apr-12	0.0318	100		3.18
1-Mar-12	0.0328	100		3.28
1-Feb-12	0.0311	100		3.11
1-Jan-12	0.0303	100		3.03
1-Dec-11	0.0298	100		2.98
1-Nov-11	0.0302	100		3.02
5 Year Average				**3.03**

1-Oct-11	0.0313	100		3.13
1-Sep-11	0.0318	100		3.18
1-Aug-11	0.0365	100		3.65
1-Jul-11	0.0427	100		4.27
1-Jun-11	0.0423	100		4.23
1-May-11	0.0429	100		4.29
1-Apr-11	0.0450	100		4.50
1-Mar-11	0.0451	100		4.51
1-Feb-11	0.0465	100		4.65
1-Jan-11	0.0452	100		4.52
1-Dec-10	0.0442	100		4.42
1-Nov-10	0.0419	100		4.19